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THIS WEEK'S NEWS

THE ROYAL FINE ART COMMISSION has approved the plans of Mr. Basil Spence for the design of the new Coventry Cathedral. p. 851

THE R.I.B.A. DINNER will be held at the Grosvenor House on Thursday, March 20 next. p. 852

CURRENT TYPES OF DWELLINGS in 14 European countries have recently been examined and reported upon by the Housing Sub-Committee of the Economic Commission for Europe. Extracts from their report are given on p. 853

"WHAT, in simple terms, is the productive function of the Building Industry?" asked Mr. D. E. Woodbine Parish at a recent discussion held by the London Association of Building Technicians. It was, he thought, the assembly of a considerable number of various types of prepared materials and manufactured components. p. 866

"IT IS CLEAR that incentive payments, whilst still in the experimental stage, are spreading and have come to stay," said Mr. Stephen Hudson, president of the N.F.B.T.E., when he spoke at Liverpool recently. p. 874

THAT THE MINIMUM SIZE of houses should be 700 feet super is one of the nine proposals set out by a new association whose object will be to further housebuilding developments on lines proposed by builders and allied trades. p. 875

SIMPLIFIED PROCEDURE for obtaining timber licences is explained in a circular issued to local authorities by The Ministry of Housing and Local Government. p. 875

TRAINING OPERATIVES IN THE U.S.

THE British specialist team which visited the United States in the early part of this year to study problems of training for industry has now issued its report.* The team consisted of 13 members, representing Government departments and organisations of employers and operatives, including the National Federation of Building Trades Employers, whose representative was Mr. Harvey G. Frost, F.I.O.B. The tour covered visits in seven States, and journeys by air, coach and train totalling about 4,000 miles. The report is presented under the following ten main headings :—(1) Purpose of the tour and scope of the report ; (2) American education ; (3) Schools and institutes visited ; (4) Vocational guidance, recruitment and selection ; (5) Apprenticeship ; (6) In-plant training ; (7) Training for the utility services ; (8) Kelly Air Base, Texas ; (9) Attitudes of management and labour to training ; (10) Conclusions and recommendations ; and there are six appendices and two illustrations, one a photograph of the team and the other a map of the route followed.

The report is not an exhaustive survey of American practice ; in fact, it does no more than record and attempt to assess what the team saw under the guidance of the U.S. section of the Council during a tour which, though geographically fairly extensive, showed no more than a sample of American methods. The broad objective of the Council and of the team was "To make a report on American methods which would be helpful to those in the United Kingdom who are concerned with training young people and adults to become efficient operatives in industry," a deceptively simple idea, as this report admits. "In retrospect," it is stated, "it seems evident that for a single team to attempt to investigate the operative training problems of the whole range of industries would be an insuperable task. A mission from any one of the industries represented in the team could usefully have spent six weeks in the U.S. investigating its own particular training operations." There is, in fact, an almost complete lack of specialised information in the report, which in the circumstances was perhaps inevitable. Nevertheless, although there are no more than a few casual references to specific building subjects, the report is full of interest for the general picture which it gives of American educational methods, and of the attitude of American workers towards training.

The report draws attention to a strange difference of atmosphere found in the schools and in industry itself. In the schools the team felt that the level of attainment was not high, that there was a lack of well-defined standards and a casual approach to their work by students and pupils—nobody was "on his toes." In industry it was completely different ; there was an atmosphere of hard work, perseverance, thoroughness, enterprise and efficiency. That the schools should produce the dynamic, energetic, able men of industry is to the team "a paradox of American education."

The report pays tribute to the physical quality of the schools and institutes visited. A general and striking architectural feature was the auditorium, which was not a school hall of the type familiar in Britain, but often a well-equipped theatre, of modern design, and used for a variety of purposes, such as graduation ceremonies, assembly, joint class meetings, the rehearsal and presentation of plays and for band practices. Every school library was set out, furnished and stocked on a scale comparable to that of our small civic libraries with a full-time librarian in charge. Every school visited had a cafeteria large enough to accommodate all students, and office accommodation and equipment were impressive. In the practical rooms the equipment generally was good and in advance of that normally provided for corresponding courses in this country.

It has often been asked why mechanisation should have

*Training of Operatives. Anglo-American Council on Productivity. 21, Tothill-street, London, S.W.1. Price 3s., post free.

made such extraordinary progress in the United States, and the answer seems to have been discovered by the team. Power-driven tools, they say, play a prominent part, and hand tools a comparatively unimportant part, in the practical work of the schools. In this country in our secondary schools woodwork is largely taught by hand-tool methods, but in America on more than one occasion the team saw the most up-to-date power tools used by industrial arts classes. "Indeed, it seems that practically no training is given in the use of hand tools; sawing, planing, mortising, even dove-tailing and finishing, are machine operations. Similarly in metalwork and other related subjects, power tools and modern equipment are provided as a matter of course."

The American attitude towards apprenticeship appears to be more enlightened than in this country. The average age of apprentices when recruited seems to be between 18 and 24, but there are many Veterans entering apprenticeship who are over 25, a large proportion of these having been recruited under the Serviceman's Readjustment Act of 1944; the team met one apprentice age 62! Training, it is stated, is much more streamlined in America than here towards productive effort, and the high average age of intake ensures a substantial body of potentially fine craftsmen at ages denied to us.

In their conclusions and recommendations the team state that within the limited scope of their tour, and perhaps with the exception of some aspects of apprentice training, they did not find any very revolutionary methods. "Technical and vocational schools are run on lines not widely different from those in this country. Apprenticeship was found to mean very much the same thing in America as it does in the U.K., and the training of adult workers in factories appeared to be conducted by methods similar to those at home." America, indeed, may have a few things to learn from us, particularly on call-up for National Service and claims for deferment, and with regard to certification for graduates in vocational education. On some points we may learn from America. For example, the team recommends that the American practice of awarding credits to apprentices for work at vocational schools, which help to shorten the period of shop training, should be investigated by those industries which have not already done so, and that the system of indenturing an apprentice not to an employer but to the local joint apprenticeship committee, which is frequently adopted in the American building industry, is suitable to widespread adoption in Britain, where the problem of apprenticeship often provides insuperable difficulties for small firms. It is also suggested that the question of age limits and periods of training for apprentices should be re-examined very carefully now that compulsory National Service has become a permanent feature of British life.

The team found that organised labour plays a much greater part in apprentice training in America than it does here. The Unions are jealous of the standing of a skilled ticket, the award of which is of real significance to a worker. It is suggested that some Unions in this country might, with advantage to employer and employed, insist upon higher standards for admission to the ranks of their skilled workers.

This, as we have indicated, is a useful general report, but at a time of dollar shortage it seems a waste of money to have sent 13 people to America for nearly two months to produce it. The team suggest that at some future time perhaps the same ground will be covered more thoroughly by other visitors to America; if that should be so, we trust that more detailed information will be sought about technical training for specific industries. We regret to note that this report is very wasteful of paper.

The new war memorial gates at Bancroft's School, Woodford Wells, Essex.

Bancroft War Memorial

THE design of the 1939-45 war memorial gates at Bancroft's School, Woodford Wells, Essex, was prepared to harmonise with the main design of the buildings themselves, which were the work of the late Sir Arthur Blomfield.

The gates, which were designed by Mr. Reginald W. Lone, F.R.I.B.A., F.R.I.C.S., M.R.San.I., are executed in hand-wrought iron work; the piers are in Portland stone and the main memorial paving from the gates to the entrance to the school is carried out in brown Robin Hood York stone. The panels containing the names of the fallen are in hand-cast solid bronze, let into the face panel of the piers on the inner side facing the entrance to the school.

The crossover from the forest land, obtained by special consent from the Forest Commissioners of the City of London, very largely contributes to the effective approach, particularly bearing in mind that the main boundary of the school and buildings to the highway is over 1,000 ft. long.

The main contractors for the work were W. and C. French, Ltd.; the wrought iron and cast bronze work was executed by Martyns, Ltd.; the Portland stone by Frank Mortimer; the Robin Hood York stone, by Knight and Co.; and the electric cable work to the lamps by Escott Brothers, Ltd.

NOTES & NEWS

COVENTRY CATHEDRAL

THE Royal Fine Art Commission has approved the plans of Mr. Basil Spence, O.B.E., F.R.I.B.A., for the design of the new Coventry Cathedral. The information was conveyed to the cathedral reconstruction committee on December 13. In its findings the commission welcomes the holding of the competition and states that Mr. Spence's design is capable of creating a fine building. It notes with pleasure the intention to make full use of sculpture, tapestry, and glass, and says it appreciates the fact that some aspects of the design are being reconsidered by the architect and that the proposals are still fluid.

The reconstruction committee met again on Tuesday to proceed with the appointment of consulting engineers, consulting surveyors, and quantity surveyors. It is hoped that work on the site preparations will be started next year.

When the variations in design have been completed by the architect they will be placed before the Royal Fine Art Commission. A model of the new cathedral is being prepared for public exhibition early in the New Year.

LONDON "OVERSPILL" PROBLEM

THE importance which the London County Council attaches to the new and expanded towns for providing a solution to their "overspill" problem was emphasised last week at a Press conference at County Hall, that was held to explain the main provisions of the County of London Development Plan, which was before the L.C.C. for approval on Tuesday. A summary of the main provisions of the plan was given in our last week's issue.

Nearly 400,000 people will have to be found accommodation outside the county boundary in the course of the next 20 years if the population densities laid down in the plan are to be adhered to. In the next three years the L.C.C.'s extra-county housing schemes will be completed, after which the overspill of population necessitated by rehousing at lower densities will have to be absorbed entirely by the new towns around London.

The L.C.C. regards the question of overspill as a national problem, and one which it cannot be expected to solve singlehanded. The problem is likely to grow more acute, and the Council's view is that there will have to be greater co-operation between the L.C.C., the new town corporations and the authorities responsible for the expanded towns than exists at present. The new towns are anxious to play their part in this problem, but if they are true to themselves they must continue to refuse to accept new entries unless or until work can be found for them in their own industries; it would indeed be a tragedy for planning if expediency forced them to add to the already too large a body of men and women who daily crowd the inadequate transport facilities for getting in and out of London.

Another aspect of the overspill problem that the L.C.C. cannot overcome alone is that of factories in London vacated by owners and employees for a factory in a new town being immediately re-occupied by other industries, with no restraints upon the bringing in of new workers from outside London. Clearly, some means must be found of breaking this vicious circle.

In answer to a question by Professor Sir Patrick Abercrombie, MR. W. J. FISKE, chairman of the town planning committee, said that if the necessary dispersal did not take place to the new and expanded towns population densities would have to be increased. MR. REGINALD STAMP, chairman of the housing committee, said that without such dispersal the plan would become a dead letter, and MR. I. J. HAYWARD, Leader of the Council, said that if the new towns did not do the job then the L.C.C. itself would have to be allowed to build outside the county.

An exhibition of maps, diagrams and models illustrating in detail the many aspects of the plan is now on view at County Hall, and will remain open until early March, or longer.

THE SOUTH BANK

THE COMPETITION organised by *The Sunday Times* (which was not restricted to architects) on what to do with the South Bank site has been won by Mr. D. Mason Jones, M.A., A.R.I.B.A., of Linton, near Wetherby, Yorks. In making their award the judges were guided by three principles, or notions, that the South Bank Exhibition recaptured an open space in the heart of London ; revealed to many new vistas of the river and the spectacle of the north bank; and provided by the Thames a place of inspiration and refreshment.

In Mr. Jones's scheme the National Theatre forms the end of a square in which are shops, cafés, trees and fountains. On the south side of the square an Airways Hotel is linked to the Airways Terminal and Helicopter Landing Station, with a multi-storey garage below. From the Theatre Square will be views across the river to Westminster through the columns of the Pavilion of Britain, and a Tower will form a new vertical feature with sight-seeing platforms. The pedestrian route, from the Waterloo Gate over the Bailey Bridge to the north bank, will join the riverside walk which runs the length of the site. Around the Shot Tower a swimming pool forms a summer recreation area, and this is linked to the permanent exhibition area formed round the Lion and Unicorn building, Telekinema and Television pavilions.

The judges state, wisely, that no competitor was able to persuade them that Government buildings would be a really welcome addition to the site. They also cordially dislike Mr. Jones's introduction of a helicopter landing station, a view in which many would concur.

The second prize went to Mr. K. G. A. Feakes, of Earley, Berks.

EMPIRE AIR MEMORIAL

WORK has started on the memorial the Imperial War Graves Commission is erecting at Cooper's Hill, overlooking the Thames at Runnymede, to the memory of Commonwealth airmen who lost their lives while serving from bases in this country, and in Europe during the war. The designs for the memorial, executed by Mr. Edward Maufe, R.A., F.R.I.B.A., which were exhibited at the Royal Adademy's Summer Exhibition in 1950, were reproduced in *The Builder* of May 5 of that year. The total cost of the memorial is £140,000, and the builders are Holloway Brothers, of London.

THE R.I.B.A. BANQUET

THE R.I.B.A. DINNER will be held at the Grosvenor House, on Thursday, March 20 next.

The Annual Reception will be held at 66, Portland-place on Friday, May 23 next. There will be a bar.

POOLE COLLEGE COMPETITION

THE name of Mr. John Haynes, M.A. (Dorset County Education Officer), was inadvertently omitted from the list of assessors of this competition, illustrated in our issue of December 7.

ADELPHI MEMORIAL

WORK has commenced on a Memorial inscription to the old Adelphi. Mr. W. Sharpington has started work on the inscription which is being cut into the first pier from John Adam-street along the terrace that overlooks the Embankment Gardens. The unusually lengthy text reads as follows:—" The Adelphi.—This building stands on the site of Adelphi-terrace, built by the brothers Adam in 1768–74. Among the occupants of the terrace were Topham and Lady Diana Beauclerk, David Garrick, Richard D'Oyly Carte, Thomas Hardy, and George Bernard Shaw. The London School of Economics and the Savage Club also had their premises here.—L.C.C., 1951."

FROM " THE BUILDER " OF 1851

Saturday, December 20, 1851

BUILDING FOR THE AMERICAN EXHIBITION.—The building designed for this purpose by Sir J. Paxton is about 600 ft. long, and 140½ wide, in three aisles. The roofs are sloping and slated, and have timber principals, which would require careful construction. There are turrets at the angles, and piers with lamps surround the whole.

COMING EVENT

FRIDAY, DECEMBER 21

VICTORIA AND ALBERT MUSEUM.—Loan Exhibition of Persian Miniature Paintings, 10 a.m. to 6 p.m. (to remain open for some months).

THE A.B.S. BALL

THE Ball in aid of the funds of the Architects' Benevolent Society, held at the Dorchester on December 12, was a great success. The organisers managed to bring off the double of raising a respectable sum (£750) for the benefit of this most deserving charity and, at the same time, of giving nearly 700 people a splendid evening.

Dancing, to Charles Ernesco and his Orchestra, was only one attraction ; others were a circus cabaret presented by the students of the A.A. School of Architecture (a good idea, though seemingly lacking an experienced producer's hand), some amusing side shows, laid on by the Regent-street Polytechnic architectural students, a " lightning " cartoonist, " Poli " (some of whose drawings are seen on this page), and the opportunity for which everyone had been waiting—to assess a competition, in this case, for " A Monument to commemorate the Passing of the Good Old Days of Architecture." The first three designs (reproduced on page 864 of this issue) show how seriously this comic conception was taken. The prizes (including those which went to the winners in the draw) were presented most charmingly by Miss Moira Lister. Fortunately for the winner of the draw, it was not a condition that the first prize (an Aga cooker) must be carried home. Congratulations to Miss Solly and her band of enthusiastic helpers.

Those who were not able to be present can do two things—to resolve now to let nothing stop them joining in the fun next year, and to send a contribution to the President's Christmas appeal, via the Secretary, the A.B.S., 66, Portland-place, W.1.

UTILISATION OF SPACE IN EUROPEAN HOUSING

A Comparative Study by the Economic Commission for Europe

CURRENT types of dwellings in 14 European countries have recently been examined and reported upon by the Housing Sub-Committee of the Economic Commission for Europe, from whose *report we take the following extracts.

The investigations include three basic types of dwelling, namely, type "A," a dwelling with two bedrooms contained on one floor either in the form of a flat or bungalow; type "B," a two-storey house (whether in detached, semi-detached or terrace form) with two bedrooms; and type "C," a house similar to type "B," but with three bedrooms. These three types are, with one or two exceptions, common throughout most European countries. The information was obtained as the result of the submission of a questionnaire to the various governments concerning current types of dwellings.

It appears that in half of the countries which have submitted evidence it is fairly common practice to construct dwellings over basements or cellars. This feature, whilst providing abundant service space for storage, for boiler plant and for washhouses, is an expensive form of construction and involves not only extensive excavation, but the construction of sufficiently strong walls to withstand lateral earth pressure, the provision of adequate damp proofing to withstand water under pressure, an additional flight of stairs, and a deep drainage system. In these types of dwellings, the proportion of service area to living space is usually much higher than in house types built without cellars, and with normal foundations.

DEEP FOUNDATIONS

This arrangement is more extensive in Scandinavian countries and Switzerland than elsewhere, and it has been explained that in these cases the severe and prolonged frosts make it necessary to take the foundations of a dwelling down to a point below the frost line (often two metres below ground level), and that in consequence the construction of a cellar becomes a reasonably economic proposition. It is reported from Sweden, however, that some doubts have arisen on the economics of the matter and experiments are proceeding to determine whether new methods of constructing foundations are feasible which would reduce costs, and lead to the omission of the cellar. If these experiments prove to be successful a substantial saving in cost will undoubtedly result.

In certain countries there appears to be a preponderance of single detached dwellings, but there can be little doubt that dwellings built in terraces are less costly than building in pairs, and that similarly, building in pairs is generally cheaper than building detached houses. It is clear, therefore, that any added amenity that there may be in providing a detached house must be fairly balanced against the increase in its cost over other types of development. If a reduced cost is to be the determining factor, then it follows that fewer detached houses should be constructed unless of course they are wholly of timber construction.

HEIGHTS OF ROOMS

An important matter on which a general observation needs to be made concerns the heights of rooms. In most countries the heights of rooms are prescribed by building bye-laws which may be of universal application throughout the whole country, or alternatively, be devised and administered by the commune or the local authority. It is observed that there are considerable variations in the heights of rooms in dwellings, and the fact that there are these variations in room heights is in itself, says the Report, important as it indicates that in all probability there is no common basis of approach. In the United Kingdom, an extensive series of studies and experiments have recently been carried out on this subject and the broad conclusion has been reached that ceiling heights lower than those prescribed by existing bye-laws could be constructed throughout the United Kingdom without any detriment to the health or well-being of the occupants of the dwelling unit. It is understood that in France and the Netherlands similar studies are being carried out. This is a matter which might profitably be reviewed by governments as it is clear that any reduction in ceiling heights of rooms will lead to economies in labour and material in the construction of walls and staircases, and result in reduced costs. This particularly applies in the case of multi-storey blocks of flats where a reduction in the height of each storey would result in considerable economies over the building as a whole.

While the Report does not single out any particular plan for detailed comment or criticism, nor discusses the relative merits of one country's schemes with another's, it is considered that special reference should be made to the evidence submitted by the Greek Government and in particular to the development of "nuclei" dwellings in that country which form a category of their own. The housing needs of Greece relative to her pre-war building wealth are estimated to be the greatest in Europe, and this fact, added to the scarcity of essential building materials in that country, has made it impracticable for the Greek Government to embark upon a large-scale capital investment programme for temporary as well as permanent dwellings as some other countries have done. Instead, the Greek Government has, by force of circumstances, developed a type of "expandable" dwelling commencing with a "nucleus" which, whilst admittedly being sub-standard, provides a family with shelter and certain minimum requirements. The "nucleus" is planned so as to be capable of being enlarged when physical and economic resources permit, and the "nucleus" thus becomes the central core of the future dwelling.

The planning of dwellings to cater for the lower income groups is an extremely complex problem in that, on the one hand, it is necessary to restrict their size to within the limits which economic circumstances will permit, and on the other, it is essential to provide sufficient space within the dwelling and so disposed that a family may live in healthy and reasonably comfortable conditions. National investment programmes, the availability of subsidies, the rent-paying capacity of the householder, the differing ways of living, and the varying methods of constructing dwellings throughout the countries of Europe affect their size and planning, and these and other factors constitute variables that are, for the most part, imponderable. It follows, therefore, that any large number of plans produced under these variable circumstances cannot be evaluated with any degree of scientific accuracy.

The essential qualities expected in a dwelling are, first, that it must be economical in its planning and overall size; second, that the individual room sizes are sufficient for the purpose for which they are designed; third, that full use can be made of all the space provided; fourth, that by good planning the circulation space is reduced to the minimum; and finally, that the dwelling has liveability, i.e., that it is convenient, healthy, well lighted and ventilated, and can be easily worked. The above factors form the background for the detailed analyses in the Report.

LIVING SPACE

Living space is defined in this Report as the total of the net areas of the living-room, sitting-room, kitchen and bedrooms. The inclusion of a kitchen in the living space calculation may be criticised on the grounds that it is not normally considered as a habitable room, but in view of the fact that in many instances the kitchen is used either for eating meals or serves the treble purpose of kitchen, dining-room and living-room, its area has been included in the living-space area, irrespective of whether it serves a single, dual, or more purposes, in order to achieve a degree of consistency in comparing living-space areas. This would have been impossible if working kitchens had been excluded from and other types of kitchens included in the area. An additional reason for this decision arises from the fact that in many plans, dining tables are shown both in the kitchen and in the living-room, and the inference to be drawn from this is that the main meals are eaten in the living-room, and occasional meals only are served and eaten in the kitchen. It follows, therefore, that in certain of these cases, the kitchen is used at times as living space, and it would have been wholly unreasonable to exclude the area of such a kitchen from the living-space calculations.

The maximum, minimum and average amount of living space in square metres in the three basic types of dwellings can be seen from the following table :—

	Type A	Type B	Type C
Maximum	61.8	73.9	89.4
Minimum	32.3	32.0	51.8
Average	49.0	53.7	64.7

* A Comparative Study of the Utilisation of Space in Current Types of Dwellings in 14 European Countries (1948–1949). Prepared by Maurice B. Blackshaw (United Kingdom), Rapporteur for the Housing Sub-Committee of the Industry and Materials Committee of the Economic Commission for Europe.

Similarly the maximum, minimum and average amount of living space expressed in terms of a percentage of the gross area is given in sq. metres below :—

	Type A	Type B	Type C
Maximum	84.8	81.0	78.3
Minimum	37.5	45.3	47.2
Average	72.9	62.6	63.3

The figures quoted above relate to the physical planning of the various types of dwelling without taking into account the variable number of persons likely to occupy the living space, and it is considered that no analysis can be complete without reference to this factor.

LIVING-ROOMS

The following table sets out the maximum, minimum and average size (square metres) of living-rooms in the three basic types of dwelling :—

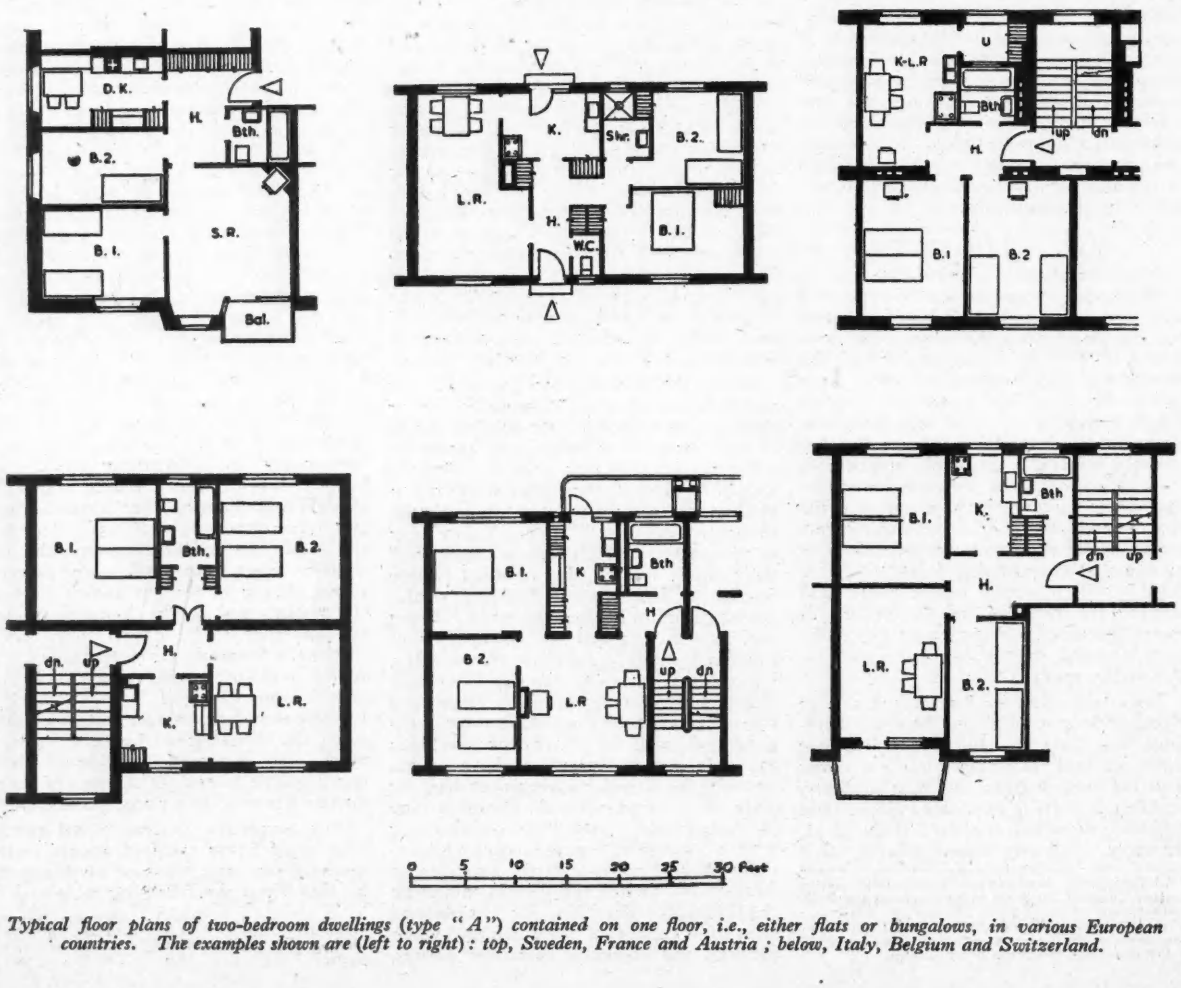
	Type A	Type B	Type C
Maximum	22.2	23.2	31.5
Minimum	13.8	11.0	11.6
Average	17.6	17.7	19.1

It is clear from a study of the plans that the uses to which living-rooms are put has a bearing on their size. In some instances, the living-room is used for family relaxation and recreation, and in others it is used for meals in addition. In two cases, the room is also used for cooking (but in one of these cases a separate sitting-room is provided in addition) and in two cases there is an indication that the living-room is used as a sleeping apartment.

With possibly one exception, none of the living rooms is excessive in size, bearing in mind that it is the principal room in the house where the family can forgather. Where the living-rooms serve a dual purpose, it is clear that some of them have insufficient space for reasonable comfort and, in consequence the members of the household would have some difficulty in pursuing their home activities undisturbed. This comment becomes more forcible when the effective space is reduced still further, as for example when the room is used to gain access to one or more other rooms and part of the floor space of the living room thus acts as a corridor. It is appreciated that the device of giving access to other rooms from the living room is usually in order to save circulation space, but where circulation space is saved in this way, it is considered that there should be some compensating area thrown into the living-room so as to avoid unnecessary overcrowding and discomfort. The fact that 87 per cent. of the plans show separate access from a hall, corridor or landing into the principal rooms indicates that in most countries the above mentioned device is unpopular.

Many of the living-rooms might be criticised in that the relative positions of doors, windows and the heating appliance are such that it would be almost impossible to furnish them comfortably. For example, there are several cases where the heating appliance is flanked by two doors allowing no convenient space for furniture to be arranged satisfactorily in relation to the source of heat and, similarly, insufficient thought has been given to the problem of furniture arrangement in many of the living-rooms which are used to gain access to other rooms. The extent to which whole-house heating is adopted would, however, discount some of the above criticisms.

There are only a few examples of this type of room in the plans submitted in evidence. The reason for a general absence of a sitting-room in addition to the living-room is somewhat surprising, particularly in the larger type of house, as most families with young children might well be expected to require an additional room for play, school work or the pursuit of hobbies, and indeed, this demand is confirmed by a recent survey carried out in the United Kingdom. The general absence of separate sitting-rooms may be due partly to the enlargement of the kitchen to serve a dual purpose or, alternatively, to the provision of a dining recess off the kitchen or the living-room, or the



Typical floor plans of two-bedroom dwellings (type "A") contained on one floor, i.e., either flats or bungalows, in various European countries. The examples shown are (left to right) : top, Sweden, France and Austria ; below, Italy, Belgium and Switzerland.

use of a bedroom as a sitting-room. The latter course may well be already adopted where there is whole-house heating, but there is little to indicate this from the evidence submitted.

KITCHENS

The following table sets out (in square metres) the maximum, minimum and average size of kitchens :—

	Type A	Type B	Type C
Maximum	12.3	16.1	14.1
Minimum	4.5	5.2	5.2
Average	8.2	9.9	10.3

It is clear from the evidence that there is room for improvement in the planning of kitchens. There appears to be a wide variation in the size and shape of equipment and cupboards, and it would be an obvious advantage if essential kitchen equipment could be designed to standard dimensions. If this ideal could be achieved, the role of the planner would be simplified and the kitchen so planned that a range of equipment of equal height and convenient size could be arranged compactly along one or two walls with good side or front light. There are, for example, many cases where the cooker is so placed that the housewife must stand in her own light to cook. In other cases, the cooker is situated close to doorways, thus increasing the risk of accidents. There are kitchens planned with several doors leading into them (including external doors) which reduce the effective working space, and some are situated in a direct line between the front and back doors creating a risk of uncomfortable and draughty conditions.

On the other hand, it is clear that some of the kitchens have been thoughtfully planned and carefully arranged, and considerable attention has been paid to the relationship between the equipment and the space where meals are eaten, whether it be in the kitchen itself, or in the adjoining living-room.

BEDROOMS

There is little evidence to show that bedrooms have been considered as anything else but single-purpose rooms. The proportion of living space allocated to bedrooms is very substantial, and if, as seems probable from the plans, this amount of space is only used during the night, it would be reasonable to suggest that there is an opportunity here for inquiry as to whether some of this space cannot serve a dual purpose and be made useful during the day. Recently an investigation has been carried out in the United Kingdom on the use and occupancy of rooms in dwelling units, and the results indicate that there is a substantial demand for a room separate from the main living-room where members of the household can work and read in quiet, or alternatively, where children can play without disturbing the rest of the family. There is much to be said for this arrangement as it would relieve the living-room of congestion at certain periods of the day, and particularly in the evening. The adoption of this suggestion should not necessarily lead to a reduction in the size of the living-room itself as this would continue to be used by the whole household from time to time, but by making better use of the space already provided in dwellings such as bedrooms it would satisfy a need which might otherwise have to be provided by the addition of extra living space on the main floor in the form of a small sitting-room or parlour. In other words, this proposal, whilst not necessarily giving cause for reducing the size of a dwelling or the rooms in it, would nevertheless tend to counteract any demand for additional living space.

The adoption of the study-bedroom as an integral part of a dwelling unit would undoubtedly create problems of heating, equipment and furnishing, but these difficulties are not insuperable, and the arrangement may well be the most economical in the long run.

SERVICE SPACE

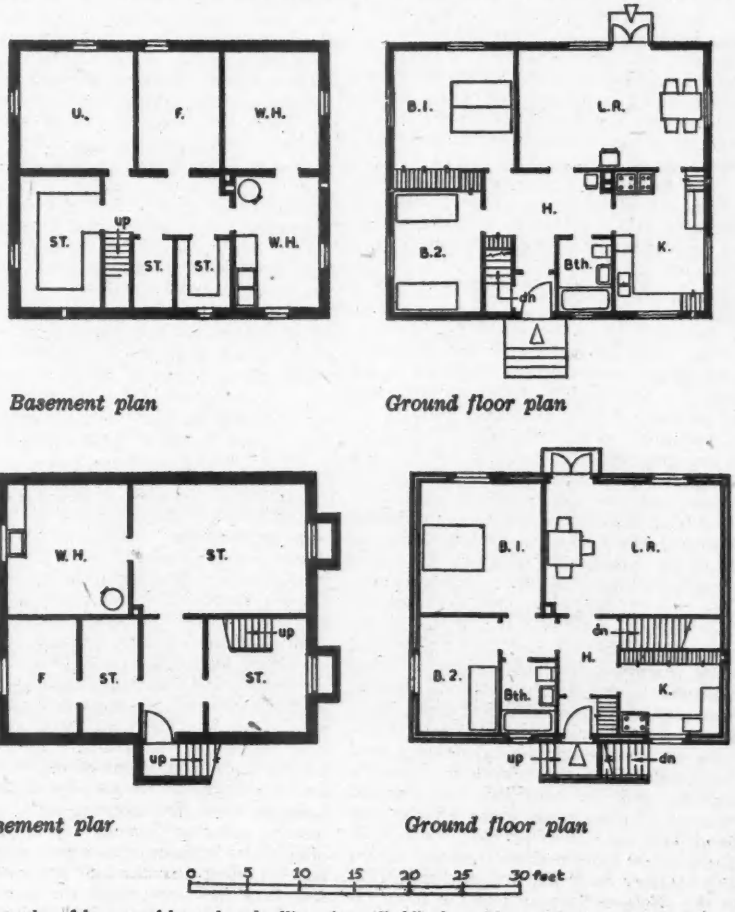
Service space is defined as the total of the net areas of bathroom, w.c., utility room, washhouse and stores. The following table sets out the maximum, minimum and average percentages of service space in relation to the gross area of the dwelling :

	Type A	Type B	Type C
Maximum	43.9	30.9	35.4
Minimum	3.6	1.9	4.1
Average	11.4	14.8	14.3

It will be seen that there is a great dissimilarity in the proportion of service space provided in dwellings. The higher figures relate to those countries where extensive basements are provided, but it may well be that these large areas are justified in that the long winter and the extra bulk of wood fuel over and above that of coal necessitate storage space far in excess of the average, and accordingly the figures must pass without comment. Moreover, it is considered that with regard to the lower figures, certain facilities for storage may well be provided which have not been shown on the plans submitted and, in consequence, the areas may well be incomplete. It follows, therefore, that the average figures might be in reality higher than shown and consequently a great deal of reliance should not be placed upon them.

BATHROOMS AND W.C.s

No comparative analysis of the sizes of these compartments has been made because of their diversity and the variable amount of equipment they contain. In Scandinavian countries the bath is often situated in the basement, either in a separate compartment or in the same room as the domestic hot-water boiler. In some other countries it is the practice to dispense with a fixed bath and provide a shower or douche instead, and yet again there are some schemes where the bathroom contains a lavatory basin or a w.c. in addition to the bath, and in others, a bath, w.c. and lavatory basin are provided in one compartment. In one case,



Basement plan *Ground floor plan*

Basement plan *Ground floor plan*

Examples of layouts of bungalow dwellings (type "A") from Norway (top) and Denmark, where the severe winters have led to the widespread adoption of large basements.

the bath is provided in a scullery. It will be seen, therefore, that there is no common basis for comparison.

Out of 46 schemes illustrated in the Report, fixed baths in bathrooms are provided in 29 schemes, and of the remaining 17 schemes six are provided in basement rooms, one is in the scullery, seven have showers instead of baths, and in three schemes no bath is provided at all.

With the exception of those countries where very adequate space is provided in the basement for household laundry, and those cases where other special provision is made by utility rooms or a special wash-house, it has been assumed that household laundry is carried out in the kitchen. This becomes an acute problem where the kitchen already serves a dual purpose as, for example, in the dining kitchens, and unpleasant congestion combined with an increase in humidity further strengthens the case that some kitchens are not large enough to satisfy all these requirements. This problem applies particularly in the case of type "A" dwellings, and it is probable that some provision is made that cannot be indicated on the plans either because the space is not appurtenant to the dwelling or is arranged on a communal basis elsewhere.

CIRCULATION SPACE

The circulation space is the total of the net areas of hall, lobby, corridors and landing, and includes the area occupied by the staircase in so far as it is appurtenant to and for the sole use of the household. The total area includes the area of cupboards where they open off the circulation space.

The following table sets out the maximum, minimum and average circulation space in each dwelling type expressed in sq. metres in terms of a percentage of the gross area :

	Type A	Type B	Type C
Maximum	15.0	25.5	21.7
Minimum	5.2	10.4	9.8
Average	11.1	17.9	18.1

The extent to which the percentage of circulation space can be reduced is in part due to the skill of the planner, and in part due to the principles adopted in the planning of the dwelling. The circulation space can obviously be reduced to a minimum if the principle is accepted that rooms can inter-communicate, and it is clear from the evidence that the minimum figures included in the table apply to dwellings where this principle has been accepted. The problem mainly concerns type "A" dwellings, and the ground-floor storeys of types "B" and "C."

In the case of type "A" there are some examples of access to one or more bedrooms from the living-room, and in these cases part of the living-room itself acts as a corridor. It is necessary, therefore, to weigh up the advantages and disadvantages of the adoption of such a system, and to consider the reduced amount of circulation space on the one hand, and the lack of privacy, the lack of direct access from bedrooms to bathrooms and sanitary facilities, and the reduction in the effective floor area of the room on the other. Unless some compensating area is added to these "corridor" rooms, the disadvantages would appear to outweigh the advantages, and indeed, a study of the evidence submitted indicates quite clearly that in most countries this principle has not been accepted, as principal rooms are generally entered from a hall, landing or corridor.

OPEN PLANNING

There are, however, opportunities for experiment and for the development of new ideas by adopting more open planning on the ground floors of two-storey houses, and it may well be found that certain space might be saved by sacrificing the separate hall and adding a part of this space to the living-room ; but this method, if adopted, would present additional problems of heating, the prevention of draughts from the open staircase, and probably the question of sound insulation between the ground-floor living-room and the bedrooms above.

With the exception of two schemes, all dwelling units contain an entrance hall or lobby. It is considered that in a few instances the hall is unreasonably large, and that some space is wasted, but in general, the entrance halls are reasonably planned provided they can be kept clear of encumbrances.

The space taken up by staircases must vary according to the height from floor to floor, their design and the relationship between the dimensions of the "treads" and the "risers." Any reduction in the floor-to-floor height will automatically save some space. Many of the staircases illustrated on the plans are very cramped for space and in this connection, it is observed that a staircase can be the scene of many domestic accidents if it is not properly lighted or the stairs are not easily negotiable. Where the space occupied by the stairs has been too restricted, this has resulted in the staircase being a series of winders. It is considered that an attempt to save money at the expense of possible injury to life and limb is not a sound proposition and in any event, the extra cost of constructing such a winding stair over that of a straight flight of stairs (which is the cheapest and most economical type of stair) might well prove to be more than the cost of the extra space taken up by a straight flight.

CUPBOARDS

In most of the plans, a liberal provision of cupboards is made ; some of them are well grouped and well arranged, as in those examples where a group of cupboards is arranged separating bedrooms, but on the other hand, there are many examples where the cupboards vary in shape and size to such an extent that it would be fair comment to describe them as "haphazard," and it is clear that many of them merely fill up awkward spaces which would otherwise have remained unallocated on the plans. Many cupboards have insufficient depth to serve a useful purpose let alone provide suitable hanging space for clothes, and in consequence space is wasted. A criticism is offered also in those cases where cupboards have in effect turned a hall into a corridor and thus have restricted the amount of circulation space. It is felt that there must be many instances where it would have been better to omit the cupboard and extend the effective area of the hall to provide space for say a perambulator.

It is believed that some standardisation of cupboard sizes would simplify planning, reduce costs and result in better use being made of the available space.

In regard to heating appliances so far as considerations of space alone are concerned, it would seem that whole-house heating by radiators, either from a separate independent boiler, or a district heating scheme, or other communal system, would have certain positive advantages.

CONCLUSIONS

Apart from the questions of space in dwellings, there is nothing startling in the way of new innovations to be discovered in the plans ; this is somewhat surprising and indicates that throughout Europe the requirements for family life, the mode of living, and the demand for accommodation conform to a general pattern, and any departure from that pattern is of such small proportions as to be of little or no consequence. The only exception is the case of Greece, which must be treated as exceptional.

If the above conclusion is broadly correct, it follows that any principles which have been adumbrated as a result of criticisms or comments on any of the plans or group of plans, are of general application and may suggest new ideas and new lines of inquiry which, in the hands of a trained designer or architect, might result in the better use of the available space within dwellings at no greater or even reduced cost.

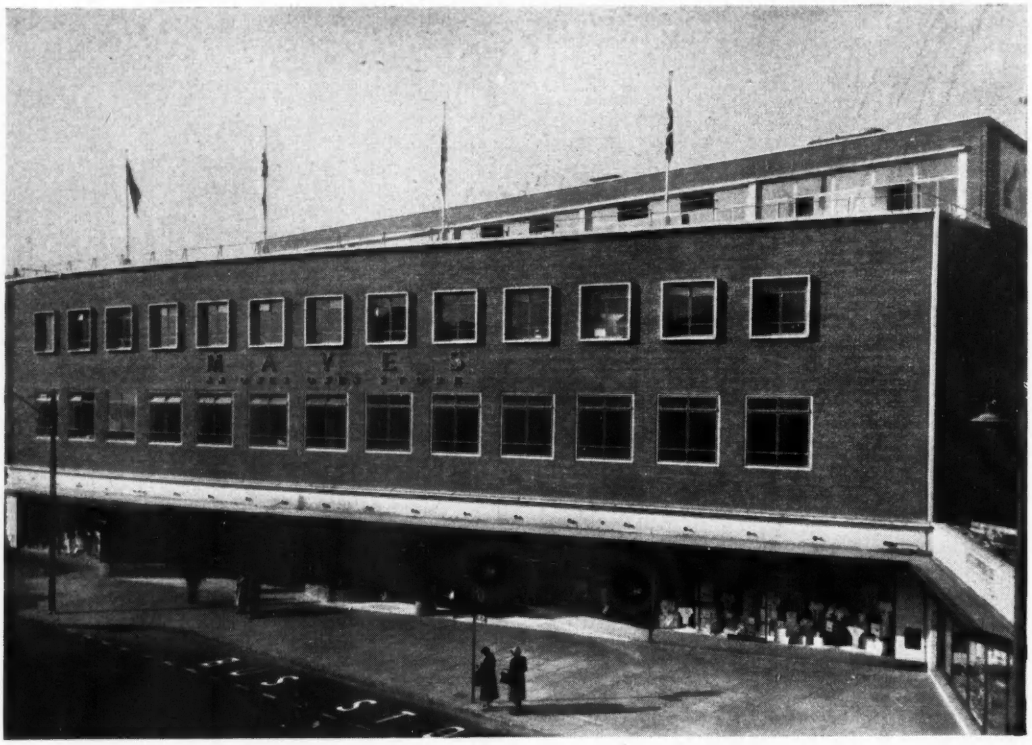
In particular, the development of the study-bedroom and the more open planning of the ground-floor living-room and hall might well alter the conception of house planning, and although this may not necessarily achieve the result of reducing the overall size at the present time, the better use of existing space will undoubtedly help to satisfy a demand for increased living space consequent upon the general raising of the standard of living, and make it unnecessary to provide an increase in floor area to meet this demand. Before this new concept of house planning can come about it will be necessary to give further attention to the heating of dwellings, thermal insulation and to sound insulation between rooms.

The standardisation of articles in common use in dwellings, e.g. kitchen fittings, sanitary fittings, plumbing units, cupboards, windows and doors, will reduce costs and in particular give better opportunities to plan rooms more economically in shape and size without reducing efficiency or convenience.

Only by obtaining the best technical advice can the most economical use be made of the space provided in dwellings, and the architect, by his training, is the most appropriate technician to undertake this work.

A selection of these designs and a copy of the report are now on exhibition at the Housing Centre, 13, Suffolk-street, S.W.1. (9.30 a.m.—5 p.m.)

KING'S COLLEGE CHAPEL, CAMBRIDGE, from which the annual Festival of Nine Lessons and Carols will be broadcast on Monday next, Christmas Eve, at 3 p.m. A new photograph, taken by floodlight, giving a view of the magnificent fan-vaulting. Usually the Chapel is illuminated by candlelight.



DEPARTMENT STORE, SOUTHAMPTON, for E. Mayes and Son, Limited

GUTTERIDGE & GUTTERIDGE, F/ARIBA,
Architects for Main Structure and Offices

TRIPE AND WAKEHAM, FRIBA,
Architects for Main Interior Work

THE new store, which is one of the Owen Owen group, is built on the original site where the first Mr. Mayes started business 125 years ago. On November 30, 1940, the store was completely demolished in an air raid. For a number of years the firm traded in makeshift premises, but in November last, the new store, which cost over £450,000 and is capable of accommodating a staff of 800, was officially opened by the Mayor of Southampton.

The framework of the main building is of structural steel with solid reinforced concrete floors and concrete beam and stanchion casings. The north-west corner of the building was, however, mainly constructed of load-bearing brickwork with various mezzanine floors of reinforced concrete. The two elevations on the east and west sides have been constructed of brick infilling panels, the outer face of brickwork being executed in selected hand-made multi-coloured facing bricks. All windows have stone surrounds. It is expected that this store will decide the treatment of the frontage, which will eventually be developed northwards to the old Bargate. The main entrance to the building faces east on to the High-street, while the outlook from the west side takes in the old walls, new docks, River Test and the New Forest. From the public restaurant on the third floor an excellent view is obtained of oceangoing liners berthed in Southampton Water.

The building may be divided as follows: Lower ground floor, main electrical and refrigeration plant rooms, despatch department, staff cloakrooms, in addition to a large showroom; ground floor, showrooms, goods reception section; first floor, showrooms, beauty parlour; second floor, showrooms, stockrooms and staff offices; third floor, public restaurant and kitchen, staff canteen and kitchen, staff welfare and training wing; and fourth floor, workrooms and stockrooms.

In building this store Messrs. Bovis, the main contractors, had a two-fold task: (*a*) to complete the various sections according to a pre-arranged schedule; and (*b*) to ensure that the client was able to carry on "business as usual" in the parts of the store already completed during the erection of the building. These objectives were achieved by adhering to a detailed programme, prepared in the early stages of the contract, which allowed for the earliest possible occupation of the lower ground and ground-floor showrooms and the north-west service and welfare block.

To enable business to be carried on in the lower ground and ground-floor showrooms long before the project was completed, the building was temporarily weather-proofed at first-floor level, where temporary offices and a canteen were constructed. These sections were occupied in October, 1950, and the day after the opening the contractors took over the small existing store on the site which meant that the firm did not lose a day's trading. The steelwork of this existing shop was then married into the new structure. Part of this operation involved the removal of a number of existing stanchions, shoring the remainder of the steel framework and inserting new stanchions

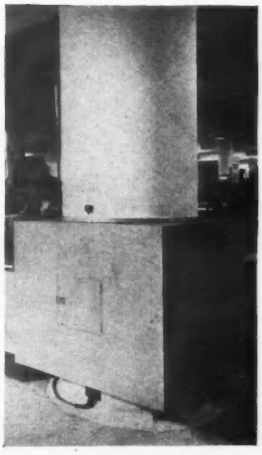
of greater depth. This was the beginning of the second phase of the work. A new programme of completion dates was then prepared for the permanent offices on the second floor and new staff canteen and kitchen on the third floor. On an agreed date the temporary offices and canteen on the first floor were vacated enabling the contractors to carry on with the major part of the second phase—first- and second-floor showrooms, third-floor public restaurant, kitchen, etc. The upper section of the building was then water-proofed as quickly as possible by constructing and asphalting the roof slab over a part of the building before the second and third floors were concreted. It is estimated that this operation saved at least three months in construction time as it enabled work to proceed on the lower floors during the very bad weather experienced earlier this year. To minimise delays alternative constructional methods and materials to be used for the job were discussed between the architects and contractors. Throughout the contract fortnightly site meetings were held with all nominated sub-contractors present, to overcome any difficulties and, where practicable, to avoid possible delays in the future. At all times the project was handled as a team effort.

THE SERVICES

Besides the normal gas, hot and cold water and electrical services, the following are among additional services which have been installed: (a) A full air-conditioning and ventilation plant for all showrooms, with the exception of the second floor, coupled with a specially designed refrigeration plant which controls the temperature and humidity all the year round. This plant is claimed to be the only one of its kind installed in the country. (b) On the second floor, which will be mainly used for furniture display, mechanical ventilation has been omitted. Heating is achieved by means of panel coils fixed in the false ceiling. This method of heating has also been adopted in the public restaurant.

FINISHINGS

Floors.—Lower ground and ground-floor showrooms have Korkoid laid to a pattern. The first-floor showroom has close-fitted carpet covering 18,000 sq. ft. and specially woven to an approved design. The second-floor showroom is fitted with linoleum. The public restaurant has a maple dance floor which is covered with a specially woven carpet, with Semtex tiles round the buffet bar area. Both kitchens have quarry tiles; the staff canteen is fitted with lino.

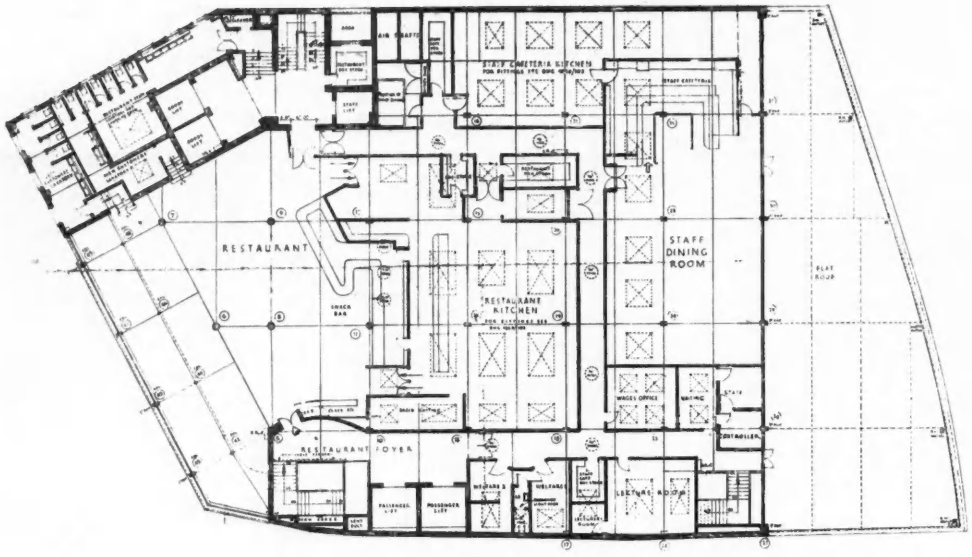


Detail of base of column. This can be rotated through 360 deg., affording maximum variety in counter layout.

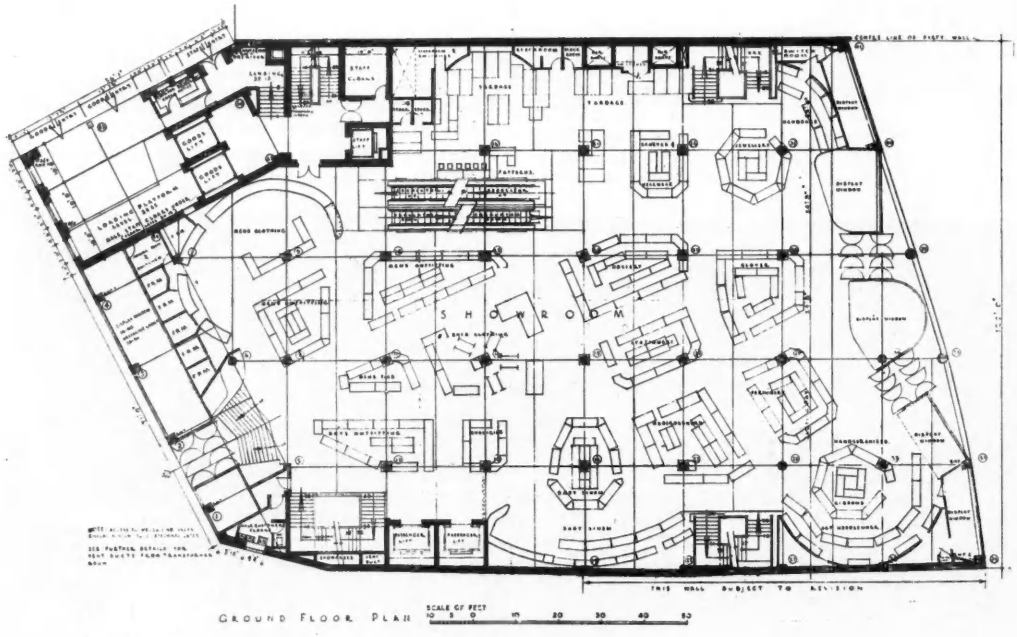
Walls.—All showroom walls are plastered with Gyproc patent plaster. The majority of these walls were painted with Vitretex compound while the plaster was still wet. This has given no cause for anxiety although applied over a year ago. Kitchen walls are decorated for hygienic reasons with Robbs smooth-surface cement glaze.

Ceilings.—Lower ground and ground-floor showroom ceilings were constructed of Gyproc Plaxstele.

General view of ground floor showroom.



Third-floor plan.



Ground-floor plan.

The first floor (the main fashion floor) has a metal framework ceiling with expanded metal lathing and plaster. The second-floor showroom is a dry ceiling of Gyproc plasterboard panels (2 ft. by 2 ft.) with bevelled edges giving a chequered effect. All panels are removable to provide easy access to services and wastes from kitchens on floor above. This is claimed to be the only ceiling of this construction in the country, and, in view of the increasing number of services now being incorporated in commercial buildings, it is thought that this type of construction may have a considerable future. The method also eliminates the use of wet processes.

ROTATING COLUMN CASINGS

Every column in the shop has four light points and one credit sanction point. On the lower ground and ground floors each column has a fibrous plaster casing with a square veneered base which can be rotated through 360 degrees. This gives maximum elasticity in counter layout as counters can be set at any angle to the columns.

The public staircases have a terrazzo finish on the treads, risers and staircase cheeks. The bronze balustrading is in-filled with Georgian polished plate glass, and handrails are of oak. There are two

escalators from lower ground to ground floor; two from ground to first floor and one from first floor to second floor. Escalator casings are of bronze and aluminium with the dwarf walls and soffits cased with ribbed hardboard, which has the advantage of making joints practically invisible.

There are two passenger lifts on the south side, calling at all floors, and one fully automatic staff lift and two goods lifts in the north-west service wing.

Among the furnishing and equipment the 30 different types of counters and showcases of standard dimensions, each of which can be placed next to any other type and are freely interchangeable within the store, are noteworthy. Goods may be illuminated in these counters, which can be connected to light points by junction leads running through each counter, thus obviating unnecessary cables running across the floor within the service area.

All the counters are veneered in Pacific maple which is used generally throughout the store on internal doors, hose reel casings and public lift cars. The light fittings on the lower ground and ground floors are a mixture of cold cathode and incandescent giving a steady, warm light of 30 foot-candles throughout the showrooms. The shopfront is mainly composed of bronze frames on blue-grey granite stallboards with backless central windows, one of which has vertical louvres which can be placed to form a solid or open back and, if necessary, any intermediate variations. The central windows have armourplate glass floors which can be illuminated from below in various combinations of colours besides intensive top illumination through plastic louvres. Off the north east corner of the building in the High-street is a large temporary show window built on a derelict site. This window will remain until the site is developed. The main entrance doors are frameless armourplate glass with bronze door handles of an unusual boomerang design.

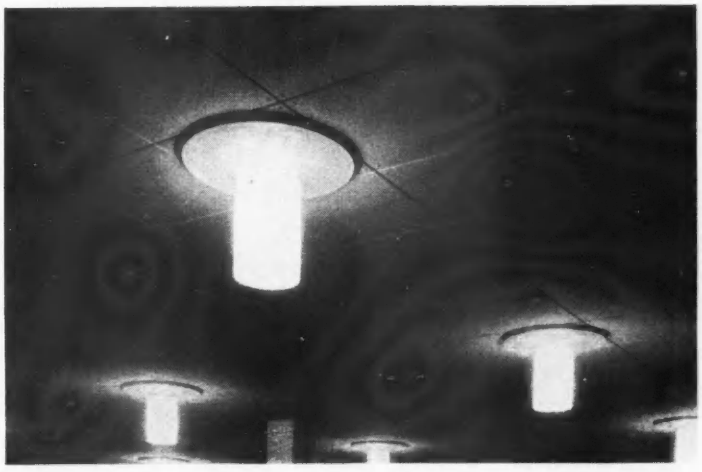
A fully equipped beauty salon with accommodation for 20 customers will be situated on the first floor. A parcel chute will be installed in the well of the S.W. stairs and will serve the despatch department from all sales floors.

The main administration staff offices in the north-west block are fully equipped with all services. Special consideration has been given to staff welfare in the provision of rest rooms, toilets, and canteen facilities.

Messrs. Gutteridge and Gutteridge, F./A.R.I.B.A., were architects for the main structure and offices, etc., in the north-west wing; Messrs. Tripe and Wakeham, F.R.I.B.A., designed the interiors of the showrooms, restaurant, kitchens and main shop windows.

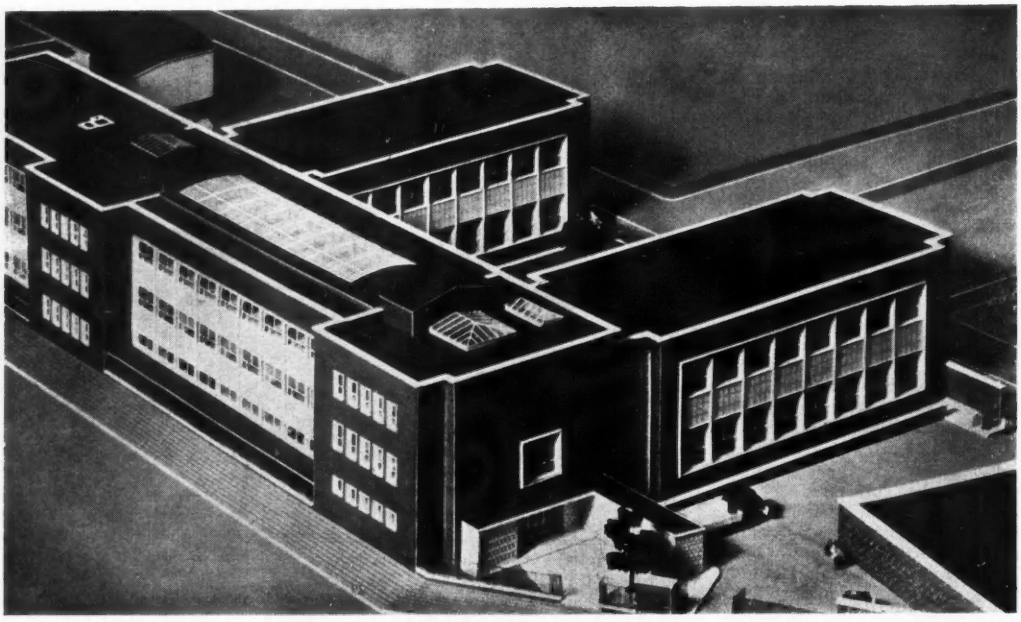
The quantity surveyors were Messrs. Lemon and Blizard, of London. All services were designed and executed under the supervision of Messrs. Sloan and Lloyd Barnes, of Liverpool. The main contractors were Messrs. Bovis, Ltd., and the sub-contractors were as follows:—

The Atlas Sprinkler Co., installation of sprinkler system; Ragusa Asphalte Paving Co., asphalting, tanking and roofing works; Phillips Floors, reinforced concrete floors; W. J. Furse and Co., electric light and power installation; Young, Austen and Young, Ltd., central heating and hot water system; Andrew Machine Con. Co., air conditioning and ventilation equipment and refrigeration plant; J. and E. Hall, Ltd., lifts and escalators; Henry Hope and Sons, Ltd., lantern lights, metal windows; Smith Walker, Ltd., structural steelwork; Arcanum Terrazzo and Stone Co., terrazzo work; E. Pollard and Co., Ltd., shop fronts; George Parnall and Co., Ltd., counters, fittings, etc.; Gyproc Products, Ltd., false ceilings; Henry Serventi, Ltd., beauty parlour construction and equipment; Bovis, Ltd., joinery; and Robbs Cement Enamel Finishes, Ltd., "Glazement" cement glaze finishes.



Detail of second-floor ceiling; the panels are removable to give easy access to services and wastes from kitchens on the floor above.

The escalator.



View of model from the north-east.

CHEMISTRY LABORATORIES, LIVERPOOL UNIVERSITY

ROBERTSON R. YOUNG, ARIBA, ARCHITECT

IN the design of the new chemistry building, the requirements were that there should be five large teaching laboratories, each capable of accommodating 80 students; balance, service and fume rooms for each of these five laboratories; two lecture theatres, each to seat 150, one lecture theatre having 300 seats, which would be used for public as well as student lectures; a library; museum; numerous research laboratories of various sizes, workshops, and chemical equipment storerooms, together with the necessary cloakrooms and lavatory accommodation for students and staff.

The site of the new building is approximately 700 ft. long by 200 ft. wide, with principal roads on three sides. On the fourth side is a deep railway cutting. The site is bounded by Grove-street, Walnut-street and Vine-street.

A limitation in the height of the proposed building was imposed, the limitation being that the number of storeys should not exceed three.

The plan of the building consists of a main "spine" on the long easterly side of the site, from which five wings project. The "spine" is three floors in height from street level, and under part of it is a basement containing heating and air conditioning plant rooms; photographic dark rooms; an electrical sub-station, and a large bulk-chemical storeroom.

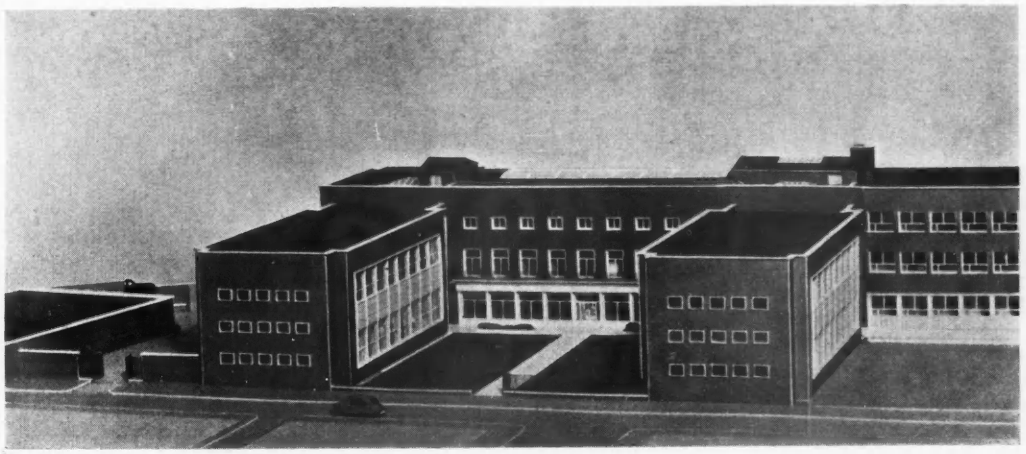
The three-storey central block itself contains all research and special research laboratories, these generally facing east, with staff rooms and a few research laboratories on the west facing onto open courtyards, which are formed between the projecting wings.

The two outermost courtyards lead to students' entrances and congregating spaces at ground-floor level of the central block. Students' cloakrooms and lavatories are placed adjacent to their entrances.

The two most northerly wings are each two floors in height and provide four of the large teaching laboratories required. The fifth teaching laboratory has been placed at the second-floor level of the central block as it was required to be top-lit for special purposes. A cycle store for students is located at basement level under the most northerly wing.

The central projecting wing contains the three lecture theatres, together with their necessary preparation rooms and public cloakrooms. The main entrance to the building is from Grove-street on the axis of the central wing and gives immediate access to the largest lecture theatre and to the wide ground-floor corridor, which runs the full length of the building. This corridor has been made purposely wide and spacious as this will be the main student traffic route. Corridors on upper floors have been reduced to a normal width.

The two most southerly wings will contain workshops and further research laboratories, and will be two floors in height only.



View of model from south-west.

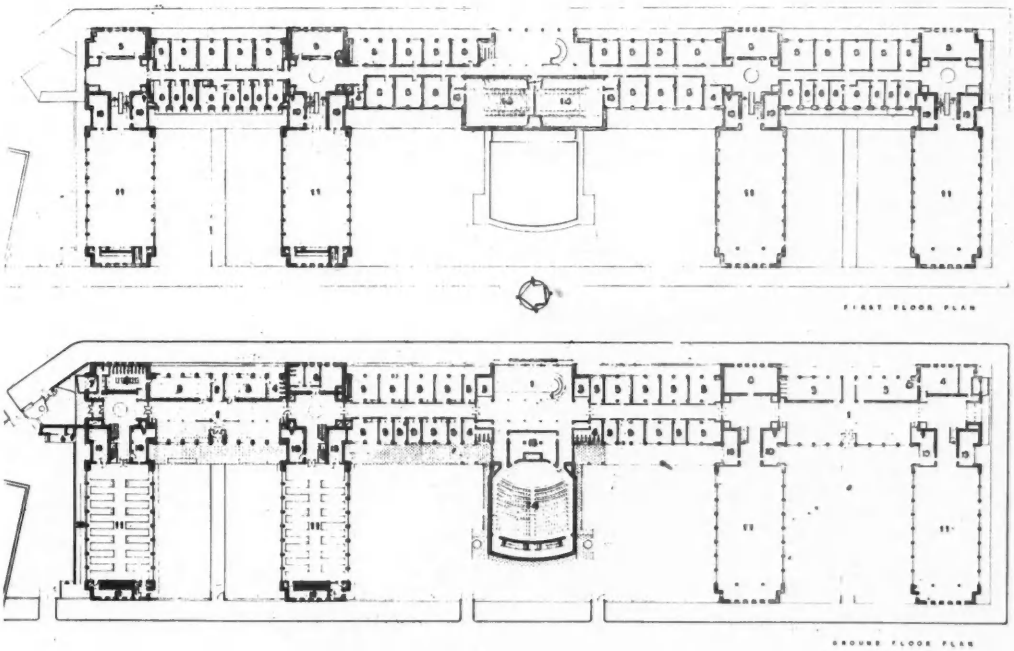
Vertical access throughout the building is provided by five staircases, one at each junction of a wing with the main block. Fire escape stairs are provided at the west end of each projecting wing.

Incoming chemical materials in bulk are delivered to the building at the service yard at the north end of the site. The materials are taken by goods hoist to basement level and then by trolley to the main general basement store. Smaller service hoists at each end of the general stores are used to deliver materials to the service rooms at all upper floor levels.

The building is to be steel framed with floors and roofs of precast reinforced concrete. The external finish is to be brick with Portland stone cills, copings and facings.

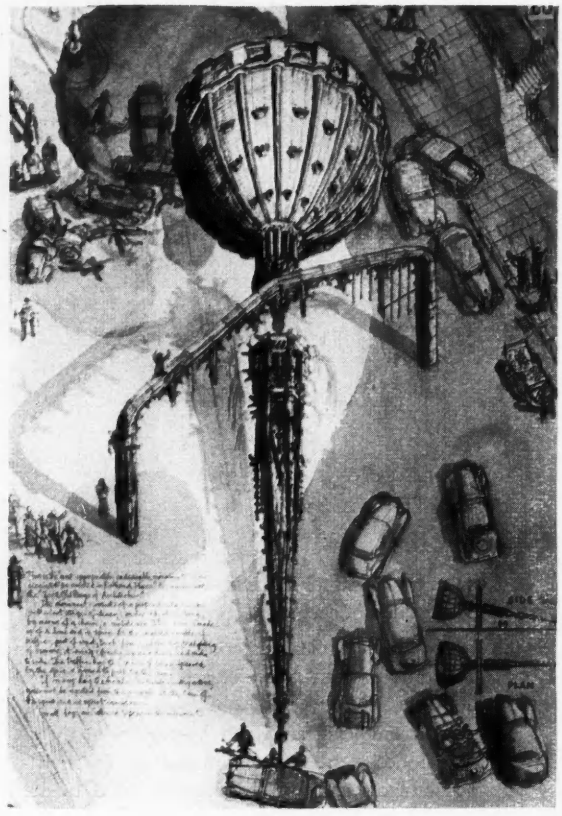
The courtyards are to be treated formally and will be turfed and paved. A few shrubs and trees will also be planted.

The building has been designed to be erected in several stages and it is hoped that the construction programme will be a continuous one. If it is, the building should be completed by 1960.



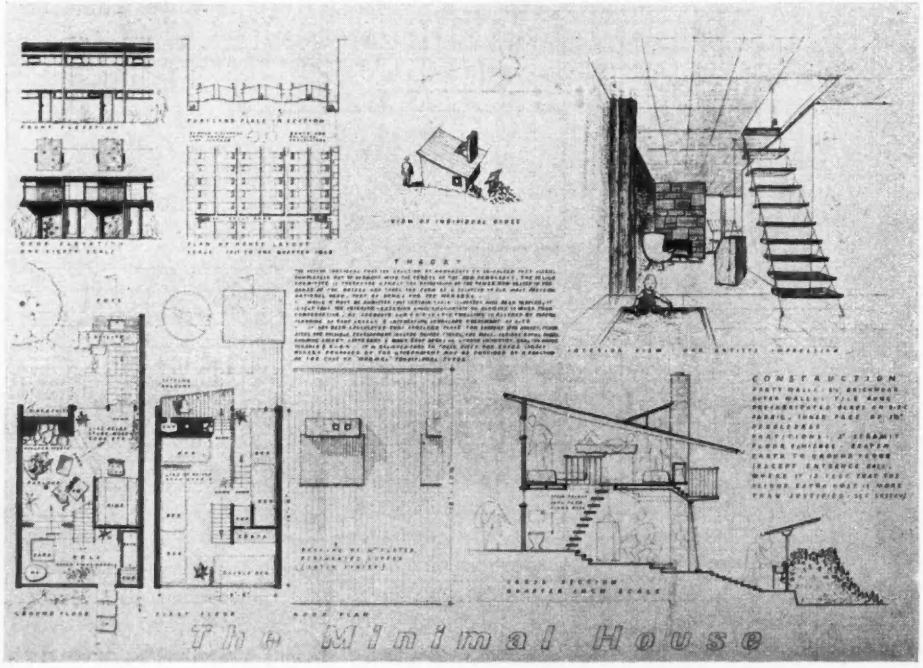
"THE PASSING OF THE GOOD OLD DAYS OF ARCHITECTURE"

Design placed First: T. A. Greeves, BA, ARIBA.



Design placed Third: G. Finch, Stud.RIBA.

All the 57 designs submitted in the competition are on exhibition at the R.I.B.A., 66, Portland-place, W.1, until January 5.



Design placed Second: Peter Taylor, Stud. RIBA.

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CORRESPONDENCE

PLANNING OF HOSPITALS

To the Editor of *The Builder*

SIR,—Before dealing with the detailed points in Mr. Hall's letter in your last issue, I should like to say that United States and Continental practice has been the subject of careful study by myself and my colleagues. While not applicable in detail to our problems in this country, the work being done abroad should not be ignored. At the least, these countries have had the experience of building hospitals during the last 12 years, while we have been unable to do so. There are important lessons in economy to be learnt from Sweden, and in compact planning to reduce walking distances from Switzerland, and these lessons we have tried to use in our work. A full analysis and comparison of English and foreign ward planning is to be found in my paper to the Building Research Congress, a reference to which was given in an article in your issue of November 30. It is not enough to condemn ideas merely because they have originated outside this country.

1. *The Nursing Unit.*—One of the principal objects of the Greenock experimental ward is to afford an opportunity to experiment with a nursing organisation a little different from that customary at the present time. It has been argued that a ward of 30 to 32 beds throws too much load on the Sister under modern conditions. On the other hand, wards with considerably fewer beds are extravagant in building, owing to the duplication of ancillary rooms, and research has shown that as the number of beds in the ward is reduced, so nurses' time is less efficiently utilised.

It appears that the answer may be to group together small units of about 16 beds, two such units being served by one set of ancillaries and four by the main central stairs.

We believe that this arrangement will result in a saving in nursing staff, as well as the obvious saving in first cost. Proof, however, must await the results of practical trial, which will remove these questions from the realm of personal opinion into that of fact.

2. *Single Rooms and Economy in Nursing Staff.*—Dr. Goodall, a former member of our team, has set out in *The Lancet* (1951, i, 1063), the arguments in favour of providing single-room accommodation on a scale of ¼ to ⅓ of the total beds. He has shown that a lesser proportion will result in very gravely ill and distressing cases having to be nursed in the open ward, under present-day conditions in acute hospitals. I therefore disagree most strongly with Mr. Hall's view that nursing economies should be sought by having fewer single rooms. Economies can be found by other means, for instance, by reducing walking distances, and by removing from the ward tasks such as linen sorting and the sterilising of syringes, which can be more economically and efficiently carried out elsewhere. Most important of all, advantage must be taken of "early ambulation" to reduce the load of nursing work. Seventy-five per cent. of patients under present conditions can make use of lavatories and washing facilities, so long as these are provided close to their beds, as we recommend. (W.c.s are not required for all single rooms, as these rooms will be occupied by the gravely ill and bedfast cases.)

3. *Building Economy.*—At the present time economy is of paramount importance in hospital building. We simply cannot afford buildings with redundant space. The size of rooms and circulation spaces should be sufficient for use, and no larger. For instance, the ward kitchen, as has been done in this case, should be designed around the equipment and method of working. For service by heated trolley at the bedside the size shown is ample. Similarly, we doubt from our experience whether the congestion Mr. Hall fears will occur in practice; here again, however, final conclusions must await the results of the experiment. Parking space for trolleys is not required, as mobile beds will be used. Wheelchairs are part of the furnishing of wards and day-space.

While the wards were not designed for use in teaching hospitals, it is at least arguable that it is preferable to provide a demonstration room to serve a pair of wards, rather than taking large groups of students into the wards, at the cost of providing otherwise wasted space around every bed.

4. *Constructional System.*—Mr. Hall is right in supposing that bearing walls are used, but wrong in saying that they are inapplicable to high blocks. If he refers again to the text, he will see that while these walls are unreinforced in low buildings, they would be reinforced in multi-storey construction. This is, of course, a well-known method of construction, and has already been used for several tall blocks of flats in London. It offers, under the right circumstances, useful economies over the more common types of framed structure.

The remaining points made by Mr. Hall concern the placing of the day space and the Sister's room. The former is certainly controversial, and there is much to be said in favour of siting it at the end of the unit. In favour of the centre is proximity to the kitchen and ease of supervision, quite important under modern conditions where patients get up one or two days after an operation. Its position, however, does not affect the basic principles, which are set out at the end of the article in *The Builder*. The Sister's room, under the nursing set-up we have in mind, is intended for administration and interview purposes. Nurses' stations for supervision are provided within the unit.

Mr. Hall complains that the design of the experimental ward is divorced from current practice in this country. Of course it is, otherwise it would not be a useful experiment. British practice in ward planning has remained almost unchanged since Florence Nightingale's designs of 1859. Her plans were experimental at the time and aroused fierce opposition as too revolutionary, but proved themselves in practice as the right solution. In 90 years, however, medicine and nursing have undergone enormous changes. Floren Nightingale's plan, even with a few more ancillary rooms added at the end of the corridor, is not an answer to the needs of to-day.

RICHARD LLEWELYN DAVIES,
Director and Architect,
Nuffield Investigation
into the Functions and
Design of Hospitals.
12, Mecklenburgh Square, W.C.1.

[Owing to an error in draughtsmanship, we regret that we were responsible for wrongly numbering some of the rooms in our article on the experimental hospital block at Greenock in our issue of November 30. The room numbered 21 should have been numbered 19; room numbered 16 should have been numbered 20; nurses' station un-numbered should have been numbered 15; and nurses' toilet room, off room numbered 10, should have been numbered 14.—ED.]

AN ARCHITECTURAL ANECDOTE

To the Editor of *The Builder*

SIR,—I see in *The Builder* the reference to Mr. Maufe, and I am sure we must all congratulate him on the distinction of being made Hon. Master of the Bench of Gray's Inn and for all the excellent work he has done in that Inn.

You refer to an incident which you say occurred at his first appearance at a dinner of the Royal Academy. This is incorrect and for the sake of historical accuracy this famous incident must be given truthfully.

The incident occurred in Lincoln's Inn Hall when I was President of the R.I.B.A., and had obtained the approval of the Masters of the Bench to hold the Annual Banquet in their fine hall. We were already seated, as you say in your note, when Mr. Maufe came up to me, but I had never met him and so did not know him, and suppose I showed no signs of recognition; so Mr. Maufe said to me: "I'm Maufe," and without thinking I immediately said "You can't do that, you've only just come." It was an interesting occasion and I believe it has enabled everybody to know how to pronounce the name of Mr. Maufe.

I am told that somebody mentioned this to the King when he came and opened a building in the Temple and he was very much amused.

BANISTER FLETCHER.
3, King's Bench Walk,
Temple, E.C.4.

THE GEORGIAN GROUP

THE INTERIM REPORT of the Georgian Group for 1951, now issued, contains a very readable extract, on the Romantic Movement, from the address given by the Duke of Wellington at the annual meeting last June, and for this reason alone it is worth obtaining; but it records also the views of the Group on a number of current problems, such as the preservation of historic houses, the repair of churches, the design of lamp standards and street furniture, on which last subject the executive committee is considering the possibility of convening a conference in 1952. A full and varied programme of visits for 1952 is promised. The report, which also includes a list of members, can be obtained from 27, Grosvenor-place, London, S.W.1.

SPEEDING THE JOB

An A.B.T. Discussion

A DISCUSSION, "Speed the Job—Who's to blame for the muddle—who can put it right?" was held by the London branch of the Association of Building Technicians on December 12. The speakers included an architect, Mr. Whitfield Lewis, A.R.I.B.A.; a representative of the contracting side of the industry, Mr. D. E. Woodbine Parish, F.I.O.B.; sub-contractor, Mr. D. H. Green, O.B.E., B.Sc. (Engineering), M.Inst.C.E., M.I.Struct.E.; a clerk of works, Mr. G. R. Millhouse; and an operative, Mr. J. Ryan. Mr. R. J. Soper, M.Sc. (Engineering), A.M.I.C.E., A.M.I.Struct.E., A.M.T.P.I., president of the Association of Building Technicians, was in the chair.

After a few brief introductory remarks, the chairman called upon the architect to give his views on the question.

MR. WHITFIELD LEWIS stressed the importance to the architect of being properly briefed for a job. He thought there were too many clients who failed to realise this point. It would have the effect of saving time in the office as it would mean less alteration to the plans at a later date and would itself result in a speeding-up of the job as any time saved in the office was time saved on the site. The builder often had not enough time to collect himself after the tender had been let. In America, he said, they had very complete pre-planning. A team was set up from the word go, consisting of the building-owner, the architect, the surveyor, the consultant and the specialist-contractor, over which the architect acted as designer and co-ordinator.

Remarking on the need for general reformation of the contractual arrangements in this country, Mr. Whitfield Lewis thought that there was a lot to be said for the setting up, by local authorities, of large direct labour departments, employing a very small executive staff and working in competition with other contracting firms. These direct labour departments would provide the greatest opportunity for co-operation.

On the subject of prefabrication, he thought it was a pity that, instead of encouraging industry to manufacture prefabricated houses after the war, the Government did not take the initiative itself and produce in its ordnance factories larger types of prefabricated components which could be used to erect buildings of all types. There was a tendency to concentrate too much on the prefabrication of the external shell of a building and not enough on the internal components. He praised the Schindler system in this respect.

The Builder's Viewpoint

MR. WOODBINE PARISH, giving the builder's viewpoint, said that while he wholeheartedly supported the desire to speed the job of building he did not accept the argument that there was a muddle, nor did he accept the charge of incompetence and backwardness so often levelled at the building industry by the lunch-time supervisor or uninformed critic from outside the industry, and he did not subscribe to the view that there was any large measure of incompetence or indifference in the very many sections that comprised this vast complex industry. That was not to say, however, that there was not ample scope for every man and woman engaged in each field of activity directly connected with the building industry to increase individually and collectively his or her efficiency and personal contribution.

Asking what was lacking to ensure the highest level of production possible, Mr. Woodbine Parish said that he would suggest that the first need facing the industry was to find means whereby it was possible quickly to raise the general standard of competence and efficiency in each section of the building industry towards the level of the most competent and efficient individual firm or organisation. The second need was for the industry to analyse carefully and in detail its whole process of production and to understand the function which it exists to fulfil. What, in simple terms, was the productive function of the Building Industry? he asked. Surely it was the assembly of a considerable number of various types of prepared materials and manufactured components.

He concluded by saying that there must be at all levels in each section of the industry a clear appreciation of the function, responsibility and obligation of each individual and a universal willingness and desire to make the maximum contribution by personal efficiency, co-operation and self-discipline. Only by these means could the building industry reach the highest level of production and output.

"No Muddle"

MR. GREEN also strongly disagreed that there was a muddle. He asked if it was suggested that the muddle was in the organisation of the industry? In the past few years, he said, the industry has been submitted to a number of investigations. The results of their work were put in two reports. If there was any muddle, surely it could or would be put right. As no recommendations had been implemented from these reports on the state of the industry, there could be no suggestion of muddle nor could there be anything which required radical alteration.

What was the speed to-day, he asked, relative to the speed between the wars? It had been said that the output per individual per week had been nearly halved. This did not apply to operatives only, but was the same all along the line. If the output per man per week was reduced, the speed of building was reduced also.

On the subject of increasing mechanisation as a means of speeding the job, Mr. Green was of the opinion that there was no method of bringing mechanisation seriously into the industry.

MR. MILLHOUSE, the clerk of works, said that in the few days prior to the meeting he had put the question under discussion to a number of different people in the industry. They all said there was a muddle, but when asked who was to blame for it each of them said it was the other fellow. This, he considered, was a bad state of affairs in an industry which was one great combine. He said he would like each of the various sections of the industry to put its own house in order before criticising the others. Looking in his own sphere, he could see that there was a great deal to be done.

The clerk of works should be the mainstay of the architect, the friend of the builder and sub-contractor, and was definitely the friend of the operative. Unfortunately, there were a number of people on all sides who did not look upon him in this way. To remedy this he appealed for a recognised grading or standing for the clerk of works.

There was one party who was missing on the platform that night, he said, and that was the client. He had heard a great deal of talk of bottlenecks in the industry and said that in his experience of bottles, the neck was always at the top.

For the builder it was a great pity that the industry was being crowded out by the financiers. These financiers, he thought, were getting the industry a bad name. No finance corporation had the interest in the crafts, but seemed only to have interest in their share-holders. The remedy for this was with the client. It was up to him to vet the list of contractors, with the assistance of the architect.

He concluded by asking all sides of the industry to get together. It was an admirable opportunity, he said, to stop pulling apart and to start pulling together.

The operative, MR. RYAN, asked if anyone could seriously contend that there was no muddle in an industry which contained 120,000 contracting firms, each with only three or four men. Everyone was told to save materials, he said, but the industry was wasting one of its most vital materials—its labour force. Referring to the poor intake of recruits into the industry, he thought that craft training and apprenticeship was being slowly murdered in this country and not merely neglected. The intake of apprentices should be 20 per cent. of the craft force.

As regards speeding the job, he said it was inevitable that the operative took the blame for any lack of speed. The only person that the operative could kick was the tea-boy. L.C.C. reports, he said, showed a 40 per cent. increase in productivity, whereas there was only a 30 per cent. increase in labour costs. But in spite of labour costs going down, prices were higher and rents were beyond the pockets of workers. Speeding the job to the operative could mean speeding the day when he would be out of work. He thought there was no sense in speeding the job unless there was enough work to justify it.

Mr. Ryan concluded by saying that the industry should be run by the people to meet the needs of the people.

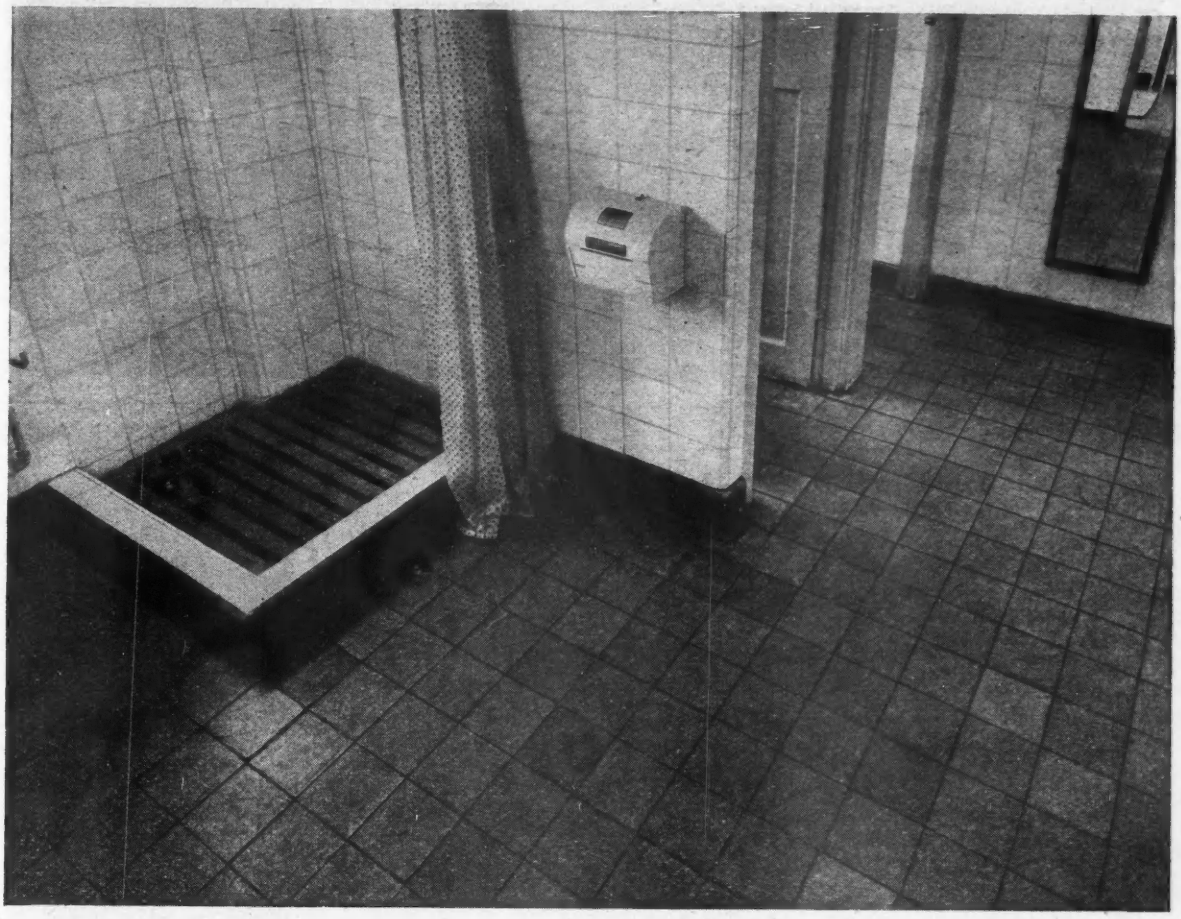
Discussion

In the general discussion that followed a member of the audience said he would like to see architects spend more time on the job. He thought it was wrong for architects to send junior members of their staff along to the site who were unable to give decisions without contacting the seniors in the office. On this question Mr. Whitfield Lewis said that if young architects were not sent on the site they would not pick up the required practical knowledge.

A student said that there were a number of boys passing through technical colleges who had spent a great deal of time and money in becoming skilled in their trades, and the only reward they received at the end of it was an extra 5½d. an hour. This, he thought, was very inadequate.

Mr. Green suggested that all craftsmen should be graded. He considered all operatives to be craftsmen as they were all skilled to a greater or lesser degree.

Pointing out that this was a most dangerous thing, Mr. Ryan asked who was going to do the grading. Incentive payments were an answer to this question and he said he knew of no law which stopped contractors from paying the good man more money.



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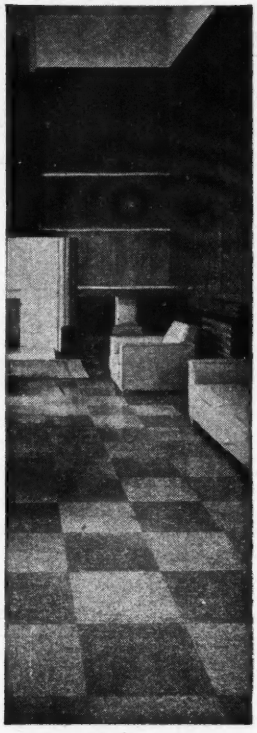

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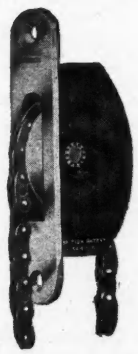

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A BUILDING QUIZ

"Twenty Questions"

TWENTY very interesting questions were asked at the recent Building Exhibition in the form of a building quiz. There was an entrance fee of one shilling, for which a form was given listing the twenty questions to be answered. The sum of 21 guineas was given by the organisers of the Building Exhibition as prize money, and the proceeds, which amounted to £309, have been donated to the Building Apprentices and Students Association (Rowing Club). As can be seen from the sum which has been raised, the quiz proved to be very popular at the exhibition, and we therefore publish below a list of the questions. The answers will be found on page 872. The quiz was set by Mr. D. E. Woodbine Parish, vice-president of the club.

1.—Identify in full:—
(*a*) A.S.W.
(*b*) B.S.S.
(*c*) C.L.B.
(*d*) N.J.A.B.
(*e*) Ro.S.P.A.

2.—Give the chief source of supply of:—
(*a*) Black bean.
(*b*) Douglas fir.
(*c*) Greenheart.
(*d*) Jarrah.
(*e*) Parana pine.

3.—Give the name of the current:—
(*a*) President of the Royal Institute of British Architects.
(*b*) President of the National Federation of Building Trades Employers.
(*c*) President of the National Federation of Building Trades Operatives.
(*d*) Minister of Works.
(*e*) Minister of Labour.

4.—Name the craftsman you would expect to see using:—
(*a*) A fitch.
(*b*) A frenchman.
(*c*) A scratcher.
(*d*) A splashstick.
(*e*) A ripper.

5.—Give a short definition of:—
(*a*) Abacus.
(*b*) Campanile.
(*c*) Ciborium.
(*d*) Cromlech.
(*e*) Entasis.

6.—Give the more common or alternative description of the following:—
(*a*) Pinus sylvestris.
(*b*) Phenol formaldehyde.
(*c*) Crystalline aluminium oxide.
(*d*) B.N.F. ternary alloy No. 2.
(*e*) Figured rolled Arctic.

7.—With what do you associate these references?
(*a*) C.2.A.B.
(*b*) CCC/Wks/1.
(*c*) CL/1136/B.
(*d*) CPS 23.
(*e*) TC3/8/CPL.

8.—How many:—
(*a*) cubic feet of coke in a ton?
(*b*) 1½-in. oval wire nails in a pound?
(*c*) lineal feet of lining paper in a piece?
(*d*) hundredweights of cement in a cubic yard of 1: 2: 4 concrete?
(*e*) superficial feet of ¾-in. P.E. boarding in a standard?

9.—Where are these famous English buildings?
(*a*) The Chapel Royal.
(*b*) The Palladian Villa.
(*c*) The Queen's House.
(*d*) The Royal Hospital.
(*e*) The Royal Pavilion.

10.—With what building material or component do you associate the following places?
(*a*) Corby, Northamptonshire.
(*b*) Delabole, Cornwall.
(*c*) Doulting, Somerset.
(*d*) St. Helens, Lancashire.
(*e*) Stewartby, Bedfordshire.

11.—Name the architect of:—
(*a*) Broadcasting House, Langham Place.
(*b*) Church House, Westminster.
(*c*) Dome of Discovery, South Bank.
(*d*) The New House of Commons.
(*e*) R.I.B.A. Headquarters, Portland Place.

12.—Supply the full meaning of these abbreviations:—
(*a*) N./E.
(*b*) R.F. & R.
(*c*) R.F. & S.
(*d*) R.C. & W.
(*e*) S.G., S.W.

13.—Dismantle, examine, overhaul and refix as necessary:—
(*a*) Lemule's alibi (3 words).
(*b*) Petum's marble (2 words).
(*c*) Teargas tower (2 words).
(*d*) Tinless Gracie (2 words).
(*e*) Under a gum pod (3 words).

14.—Name the original location of:—
(*a*) The Academy.
(*b*) The Alhambra.
(*c*) The Capitol.
(*d*) The Lyceum.
(*e*) The Rialto.

15.—Complete the following:—
(*a*) Alizarin.
(*b*) Antwerp.
(*c*) Brunswick.
(*d*) Naples.
(*e*) Venetian.

16.—Name the architectural style of:—
(*a*) Albany.
(*b*) Royal Courts of Justice.
(*c*) St. Bartholomew the Great.
(*d*) St. Paul's Cathedral.
(*e*) Westminster Cathedral.

17.—Supply the address of:—
(*a*) The Building Research Station.
(*b*) The Institute of Builders.
(*c*) The National House-Builders' Registration Council.
(*d*) The National Joint Council for the Building Industry.
(*e*) The New Building Centre.

18.—What building material would you expect to see described as follows?
(*a*) ½ in × 6 lb.
(*b*) 24 carat.
(*c*) 26 oz. clear.
(*d*) 1½ in. No. 12 R.H.
(*e*) ¼ to ⅜ in.

19.—With what do you associate the following names?
(*a*) Edmund Gunter.
(*b*) Joseph Hansom.
(*c*) Greville Montgomery.
(*d*) Guilford Molesworth.
(*e*) Angus Smith.

20.—Complete the following sayings:—
(*a*) Clearing the.
(*b*) Footing the.
(*c*) Loading the.
(*d*) Paving the.
(*e*) Setting the.

There are alternative answers to a number of the questions.

DEVELOPMENT PLANS EXPLAINED

A Guide for the Layman

THE Ministry of Housing and Local Government has thought it desirable, in view of the number of people interested in the methods of planning demanded by the 1947 Act, to issue an explanatory booklet* prepared by Mr. B. J. Collins, County Planning Officer of Middlesex, to give in simple terms the reasons why plans are necessary, what they would look like, and the meanings of the technical terms employed, some not obvious to the lay mind.

It is stated that the views expressed in this booklet are the author's own, but its acceptance by the Ministry justifies the assumption that they are in the main acceptable to the authorities, and can be taken as guidance by those operating under the Act, more especially as distribution has covered the daily popular Press with the obvious view in mind of securing the understanding and sympathy of the general public. This is an aspect of some importance at the present time. While the principles laid down are, in the main, familiar to the technician engaged on planning, they are not so easily understood by the layman.

The illustrations include plans showing rural and urban land use, population density, a typical view of nineteenth-century housing development, and one of an attractive small town in danger of being expanded on lines destructive to its amenities. The notes accompanying these are explicit and in easily comprehensible form; they are preceded by a brief summary of the requirements of a preliminary survey divided into four sections. (1) *Vital Survey:* covering population, trends and needs, density, distribution and migration. (2) *Territorial Survey:* use of land, residential density and relationship to industry, commerce and public utilities, agriculture, forestry, etc. (3) *Functional Survey:* industry, commerce and employment, transit and communications, labour and material development, rating and finance. (4) *Social Survey:* community structure, health, education, recreation, open spaces and other amenities, also aesthetic and archaeological considerations. The relative importance of these surveys will vary greatly according to the type of locality to be examined, and examples follow as to the effects of the survey on the ultimate plan.

The author adds a postcript to his work which he rather maliciously heads as the "jargon" of the planner. It might legitimately be entitled a glossary of planning terms, as a few specimens quoted show:

Betterment: Increase of value due to replanning. *Blighted Area:* Area characterised by bad layout or by obsolete buildings. *Designation:* The earmarking of an area for compulsory acquisition for public purposes. *Enforcement Notice:* To correct illegal development of land. *Floor Space Index:* The ratio of floor area to that of the land on which the building stands. *Non-conforming Buildings and Uses:* Uses of buildings or land other than those indicated on the agreed plan. *Overspill:* The number left over when an area has been replanned, reducing the density of occupation. *Ribbon Development:* Buildings ranged exclusively along main traffic routes. *Zoning:* The division of land into separate areas for specific purposes.

H. V. L.

* DEVELOPMENT PLANS EXPLAINED. By B. J. Collins, County Planning Officer of Middlesex. 1951. Oct vo. H.M. Stationery Office, price 1s.

TOWN PLANNING AND HOUSING

Views of the Town and Country Planning Association

THE Executive of the Town and Country Planning Association have issued the following statement on town planning and housing. The statement begins with an examination of the broad principles of planning. Under this heading the emphasis placed by the new Government on housing correctly reflects, in the Association's view, popular opinion and public interest. The statement continues:

Improved housing and living conditions not only make for personal happiness and contentment, but are vital to economic efficiency and greater production. The Executive therefore welcome the intention to speed up housing output to the extent that other essential claims on manpower and materials permit.

It is, however, essential that the new houses shall be of the right kind and in the right places; otherwise the social and economic benefits aimed at will be frustrated. For example, if more dwellings are built, at excessive densities, in central areas, that means a deterioration in standards of space and amenity and continued extravagant cost in subsidies. It entails an undue proportion of flats, whereas the aim should be not to exceed 20 per cent. of flats in any area.

If the houses are built in the suburbs of large cities, even at satisfactory densities, that means lengthening journeys to work, increasing traffic congestion, and a further loss of green-belt land. Thus the speeding-up of housing makes it even more urgently necessary to apply effectively the national planning and redevelopment policy evolved and accepted by successive Governments since 1941.

The Association has consistently appealed for a more energetic and better-co-ordinated pursuit of this policy. In renewing this appeal, the Executive ask for special attention to the following measures:—

(a) *Blitzed and blighted areas.* Redevelopment at satisfactory standards of density as rapidly as resources permit and the displaced people and industry can be provided for elsewhere.

(b) *New towns.* Acceleration of the building of those already started, and selection of further sites for the overspill of crowded areas.

(c) *Country towns.* Implementation of the policy already agreed upon for encouraging the settlement of industry and population in small towns capable of expansion.

(d) *Housing allocations.* A drastic revision of the allocations as between localities, to increase building in reception areas and permit a lowering of density in any immediately practicable central redevelopment.

(e) *Housing subsidies.* Drastic revision of present scale, which is heavily loaded in favour of flats, of housing on expensive sites, and of small floor areas. (Flats of 600-650 sq. ft. in London have had subsidies up to £2,900 in capital value, as compared with a normal subsidy of £600 on houses of 900-1,000 sq. ft. A one-bedroom house now receives the same subsidy as a four-bedroom house, the proportion of subsidy to rent thus being highest on the smallest houses.) A special subsidy should be given for small houses reserved for old people only.

(f) *Location of industry.* Policy of the Board of Trade and sponsoring Ministries, in issuing location certificates and building permits for factories and factory extensions, to pay full regard to the social and economic necessity of dispersal. Steps to be taken, with fair compensation from central funds, to prevent the reoccupation of factories from which firms have been decentralised.

(g) *Roads and transport services.* Capital expenditure on new roads or expansion of services to anticipate and facilitate dispersal and not to promote suburban expansion or wasteful daily journeys.

(h) *Development plans.* Policy in Ministerial approval of the development plans submitted or in progress in all areas to support expansion of smaller towns, to restrict expansion of overgrown towns, to insist on standards of maximum housing density that will permit of a general provision of home gardens, and to secure a fair balance between the claims of food production and living-space.

(i) *Rural areas and food production.* Development policy in rural areas to encourage the settlement of industry in market towns, with corresponding housing there and in adjacent villages. Siting of new developments to avoid waste of farmland, but housing density to be limited to permit gardens large enough for vegetable-growing (at least 10 rods).

Building and Other Controls

The Association shares the general dislike of controls, and would welcome any possible releases. But allocations of capital and building resources determined by Government policy are at present far more decisive in influencing the location of population than is town planning, which in itself is less oppressive because it leaves much initiative and freedom of choice within wide limits. Planning does not thwart development, but canalises it in directions economically and socially advantageous.

When, as may be hoped, other controls are eased, town and country planning will remain of immense importance. It is therefore essential that the careful working out of the development plans shall continue. They are the means of safeguarding human standards and enhancing efficiency in satisfactory physical communities.

In the meantime, Government controls over capital expenditure, and building and other licences, should be so administered as more consistently to support the intentions of the town-planning policy. The Ministry responsible for planning should be regarded as the co-ordinating Ministry for all decisions and licences affecting location.

Claims for Development Value

The Association is not committed as a body to detailed approval of the financial sections of the Town and Country Planning Act, 1947. The Analyses in the Uthwatt Report 1942 and the Coalition White Paper 1944 both showed, however, that planning could not in practice check development in situations injurious to the public interest without adverse influences on privately owned land values. In particular, the reservation of green belts and farmland near cities would produce grave injustices to owners unless compensation could be paid; and the scale of the sums involved, as well as the incidence of benefit from values directed elsewhere, were such as to make a local equation of compensation and betterment quite impossible.

It was therefore agreed by all who studied the problem that some such expedient as the national acquisition of development values on undeveloped land was necessary.

The Association supported the principle of fair compensation for global acquisition of development rights, and the corollary of some form of levy or charge on increased or re-created development values. In doing so, it did not contemplate that the levy or charge would be 100 per cent. of the value, which removes an owner's incentive to dispose of land for development.

Suggestions as to possible means of amending the law or procedure, without abandoning the principle, are made in the Appendix hereto.

Re-emphasis on National Policy

In conclusion, we draw attention to the need for clear, high-level explanations of national planning policy, particularly as it affects housing standards, living and working conditions, defence, and long-term development of the country's resources.

We feel that recent official emphasis has been too much on aesthetics, countryside preservation and protection of farmland. Important as these are, they are not more important than the encouragement of wise expansion of industry, and the provision of housing satisfactory for family life, with gardens of adequate size for growing food.

Good housing embraces, not only the houses and their gardens, but siting convenient to work, shops, schools, and recreation. Town and country planning is a service essential to ensure a sound combination of all these things. Its functions need to be more widely understood.

APPENDIX

Development Value Claims and Development Charges

1. The proposal, which has been advanced, to abolish the £300,000,000 fund, while retaining power to prohibit building on green-belt and farmland, without compensation, would be entirely unjust to many owners. The hardship would be so offensive to public opinion that much undesirable green-belt building would not, in practice, be restricted.

2. Possibly the present system tries to go beyond reasonable fairness and to reach mathematical justice, which is impracticable in view of "floating values" and the need for an incentive to dispose of land for building. If the development charge were fixed, in the case of a sale, at 75 per cent. of the actual purchase price, less present-use value, and where the owner develops at 75 per cent. of the assessed development value, would not this avoid the "double price" and maintain a sufficient incentive in normal cases?

3. It is suggested that, at the time of any collection of any development charge, 50 per cent. of the owner's admitted claim on the fund be set off against the charge, the balance being payable in 1953.

4. These two revisions would much reduce the uncertainty and sense of injustice arising from the "double price" and the deferment of distribution of the fund.

5. If the fund yields claimants 75 per cent. of their assessed claims, this would not seem so unfair, as an offset to a 75 per cent. development charge. Possibly a guarantee

should be given that the distribution will be at least 75 per cent.

6. Attention is drawn to the fact that the present restriction on private building has created a wide gap between the value of a house for occupation and for investment. In a normal free market the value of land is the highest price that a purchaser will pay. If, therefore, the Central Land Board really collected 100 per cent. of the development value the purchaser would not pay an additional sum to the seller. The absence of a seller's incentive would then absolutely bar development, and the charge would have to be reduced by some percentage. This suggests that the present ability of purchasers to pay a "double price" is due simply to the scarcity value of building licences. The passing of part of the cash value of a licence from the holder to the seller of a site is one of many anomalies due to the rise of building costs coupled with rent control.

These suggestions have not been technically worked out, and are regarded as indicating principles only. The Executive are primarily concerned with maintaining the underlying principles common to the Uthwatt recommendations, the White Paper, 1944, and Parts VI and VII of the 1947 Act. If these were abandoned, planning could no longer preserve green belts on city fringes, good agricultural land and extensive areas of natural beauty, without grave hardship to owners whose land has a building value in the market.

OXFORD GAS WORKS

Question of Siting

THE Southern Gas Board's case for extending the existing gas works at Oxford rather than building entirely new works at Cowley, several miles away, was put by Mr. O. R. Guard, chairman of the Board, at a Press conference in London on Monday.

Mr. Guard produced two main arguments in support of extending the existing works. First, that the construction of a new works on an alternative site could not be completed in time to avert danger to the existing supply, much less enable new demands for gas by industrial and public services to be met; and second, the need for economy occasioned by the rearmament programme.

Savings in Materials

It had been estimated, he said, that £½m. would be saved by adopting the plans for extension to the present works rather than by building a new works. The saving in materials would include: Mild steel, 1,450 tons; cast iron, 1,910 tons; cement, 1,400 tons; softwood, 110 standards; and bricks, 560,000.

Mr. Guard denied categorically that there had been any abrogation of agreements in regard to proposals for the siting of the works. He said that since nationalisation the Board had agreed that the new gasholder (not the gas works) should be built at Cowley rather than on the Oxford works, to meet the objections which had been made; to consult the Royal Fine Art Commission on the design and arrangement of the buildings for the extension to the Oxford works; and had agreed that the main cause of the smoke and dust nuisance—the old retort house on the north works—would be removed immediately the new extension was completed.

Landscape Aspects of Development Plans

MR. JAMES ADAMS' ADDRESS TO THE TOWN PLANNING INSTITUTE

A PLEA that adequate weight should be given to the landscape elements in the planning problems of town and country was made by MR. JAMES W. R. ADAMS, F.I.L.A., P-P.T.P.I., in an address to the Town Planning Institute on "Some Landscape Aspects of the Development Plan," at a meeting at Caxton Hall, London, on December 6, the president, Mr. E. H. Ford, in the chair. Mr. Adams said he did not share the depression in relation to town and country planning in general, and to development plans in particular, which existed in some quarters, and went on in his paper, from which we reproduce the following extracts, to contrast the "bad old days" with the position we found to-day. Mr. Adams said:

I mean by the "bad old days" the period between the Act of 1909 and the setting-up of the Barlow Commission in the late 'thirties. They were bad days because the eyes of thinking men had been opened by Geddes, Ebenezer Howard, and a number of others, some of whom became Presidents of this Institute, and, although all political parties gave lip-service to the need for town and country planning, those whose eyes had been opened had to witness during that period a good deal of stupid and shortsighted behaviour and found themselves powerless to stop it. The break-up of farm units, the loss of first-class market garden and other agricultural land, semi-detached villa developments of obscene designs spreading themselves in ribbons on main traffic routes or sporadically over the countryside—and all this notwithstanding the fact that politicians, economists, town planners and others knew perfectly well that these operations would prove extravagantly costly to the country and to the communities concerned.

THE POSITION TO-DAY

Now let us look at the position to-day, using as our basis a typical county development plan. Being trained to interpret maps we can translate the county map, with some difficulty perhaps, it may be said, and the town maps with less difficulty. Here let me say that I entirely agree with our President in his plea for maps which the intelligent layman can understand. Surely all local planning authorities will prepare popular editions of the statutory maps to exhibit to the public; if any fail to do this they will deserve, in my opinion, all the adverse criticism that they will assuredly get.

However, to return to our interpretation of the development plan. We see a background of farms, villages, hamlets, perhaps mountains, or downs, woodlands, nature reserves, large areas owned by the National Trust, local authorities or other bodies. Through this background—free, we hope, from the more objectionable forms of outdoor advertising—run major and other highways, including footpaths, and perhaps special long-distance footpaths. Here and there may be existing or future surface mineral workings within delimited areas and other special allocations of functional land use.

Set in this background are the towns, large and small, their development areas specified in such manner, it is to be hoped, as to create compact, convenient communities within which the town planner, the architect, engineer and landscape architect can find suitable opportunities for designing and carrying out detailed projects. If the present Government succeeds, notwithstanding the great difficulties and obstacles to be overcome, in accelerating the building of houses by public and private enterprise, all concerned will, in my view, have cause to be thankful that so many development plans are now available, whether submitted to the Minister or not.

Is this all just a picture? Fortunately it is not. The agricultural land is jealously guarded; mountains and downland are safeguarded; nature reserves are the concern of the Nature Conservancy and the National Trust, and publicly owned open spaces, such as those purchased under the London Green Belt Act of 1938, are dedicated as open land in perpetuity; surface mineral workings are subject to control under the 1947 Act and substantial progress is being made in the solution of this problem.

REGIONAL DESIGN

Can this properly be described as regional design as distinct from the more detailed civic design involved in the detailed planning of town areas? I submit that it can be so described and will be by those with sufficient imagination to interpret fully the admittedly dull statutory plans.

I do not claim, of course, that the general design implemented by the county development plan is landscape design. Many elements in it, nevertheless, involve landscape design and other elements give opportunities for the landscape architect. I will now mention some of these elements.

The selection and control of areas of special landscape or scenic value require a knowledge of landscape design. Where agricultural land of high value exists, this fact should normally be sufficient to determine the pattern of development, and there will often be no justification for specifying even the more attractive of such areas as being in a special landscape class; but where scenic value is high, agricultural value is often low. Development will have to be more drastically controlled in these scenic areas than elsewhere. Such a specially restrictive policy could only be justified if clearly announced in relation to the development plan, so that owners and prospective purchasers will be adequately warned. This is, in my view, the justification and the proper reason for defining areas of special landscape value in the development plan, and of indicating quite clearly in the written statement the general policy

to be adopted in the control of development when the plan is approved.

As to trees and woodlands, preservation policy should, in my view, receive careful consideration from the point of view of landscape design, and, further, attempts should be made to formulate a policy of preservation integrated with the planting schemes of the Forestry Commission, which will ultimately produce an intelligent pattern of woodlands and forests throughout a given region.

I hope that our friends the road engineers will not misunderstand me when I put in a plea that landscape design should receive far more consideration than heretofore in the selection of routes for new roads and by-passes, in the detailed design of roads, and in the landscaping of roads. We want less reliance upon so-called "road beautifying" and more attempts to relate new roads intelligently to the existing landscape or to use the opportunity of a new road project to create new and well-designed landscape.

With regard to surface mineral problems, we shall have our National Parks, our areas of special landscape value, and I hope a few "follies" to provide what Mr. Jellicoe has called the "playground of the mind." Subject to this, however, I think our approach to the problem of surface mineral extraction should be positive rather than negative, creative rather than preservationist—in other words, intelligently functional.

OUTDOOR ADVERTISING

It may be thought that the control of outdoor advertising is not connected with the development plan. It is, of course, outside the scope of the statutory plan, although the Act of 1947 enables the Minister, if he wishes, to provide by regulations for the inclusion of areas of special control as one of the contents of a development plan. I am sure it will be agreed, however, that it is not sensible to protect woodlands, to define special landscape areas, and to design roads in relation to the landscape, among other things, unless a sound policy of controlling outdoor advertising is co-ordinated with these planning operations. So far as rural areas are concerned, at least, the control of outdoor advertising is an important feature of the landscape aspects of the planning of a region.

The task of the local planning authority has been made much easier by the activities of the body known as the Outdoor Advertising Industry Advisory Committee, which represents all the commercial interests involved. My experience leads me to the pleasant conclusion that a new and enlightened approach to the problem on the part of those interests is being engendered and developed by the advisory committee.

I hope I have not given the impression that, because I have referred to aspects of the development plan as landscape aspects, I am endeavouring to put forward a case for treating the landscape architect as the best-qualified practitioner, rather than the town planner, to design a regional plan. The landscape architect, in my view, is no more fitted to act as the regional planning designer than is the modern geographer. Both have important contributions to make, and the landscape architect should certainly be used, in his own field, to implement certain elements in the development plan, as should the architect in this great field.

What I have tried to imply, however, is that the town planner, who must have knowledge of landscape design as part of his equipment, should give adequate weight to the landscape elements in the planning problems of town and country, and that these landscape elements are more numerous and more important than is sometimes realised.

What a privilege it is to be allowed to play a part, however humble, in the reaction, protection and evolution of the countryside of this beloved land of ours, in which worthy setting can be developed the homes, work-places and playgrounds which it is the primary duty of the town planner to make practicable as well as possible.

DISCUSSION

In the discussion, MR. G. A. JELLICOE, Past-president of the Institute of Landscape Architects, said that while in time landscape architects would be used in relation to town and country planning as engineers and surveyors were used to-day—as specialists—it was not to be expected that the profession could take its full place at the moment. There were two difficulties facing the advance of the profession of landscape architects at the moment: one was lack of numbers and the other the lack of a philosophy such as town planners already had. Mr. Jellicoe thought some areas needed to be unplanned. He gave as an illustration a stretch of coastline in Kent where, he said, people had gone to live their own lives in their own way. For such areas what was wanted was just a few written orders whereby the area could develop as each man liked—and each man by his own urge would develop something which was very likeable.

MR. R. W. DALE said planners had to prove to the ordinary man in the street that the development plan could make a valuable contribution to the policy for the whole country. One of the things about Mr. Adams's paper which had appealed to him was that apparently Mr. Adams looked at an area as a whole. In the past too many otherwise excellent schemes had been used as the background for a great city. In many such schemes a great city had used the background for its own purposes.

As for popularising the development plan, he thought there was a danger that, since there was often a rush to get the development plan out, popular editions might not be ready for six or twelve months later. Harm might be done in that case. This difficulty could be overcome by making proper use of the analysis of the survey. This was a thing which the Ministry did not have to approve, and therefore one could say what one liked in it. One could argue one's case in a way which would be accepted by the man in the street. Then the popular editions of the plan could come out later.

MISS J. F. ADBURGHAM commented on a slide which Mr. Adams had shown in which a building which he thought was an excellent example of architectural functionalism was surrounded by a fringe of Lombardy poplars. She regretted this tendency to hide buildings in this way, and gave the motor works at the Guildford end of the Guildford by-pass as another example of a building which it was sought to hide with poplars. The proper thing to do, she thought, was for the planners to make conditions about the building before it was erected and not wait until it was up. In the case of the building at Guildford much could have been done by special treatment of the materials used.

MR. M. FULLER spoke of the spoliation of landscapes by the extraction of materials such as chalk and limestone and the pollution of the atmosphere by such plants. A lot had been done by special equipment to reduce this nuisance, but even the most modern American machinery did not reduce by more than 25 per cent. the material in the form of dust going into the atmosphere and settling on the landscape.

THE PRESIDENT (Mr. E. H. Ford) expressed pleasure at the work being done in some of our loveliest counties to regulate outdoor advertising in the interest of the preservation of the beauty of the countryside. Many settlements had been achieved, he said, by discussion of the problems involved by the interests concerned, through the Outdoor Advertising Industry Advisory Committee. That committee was only too anxious to get rid of the old bill-sticking attitude.

He agreed with Mr. Adams in that the matter of planning should be looked at as a whole, not just from the point of view of the towns. He had staggered the planning authority at Coventry by saying that they must plan for an area of 40,000 acres and not merely the city area. He believed that now the county councils had planning powers we should see more complete planning, especially if adjoining counties were prepared to co-operate in planning.

Replying to the discussion, MR. ADAMS said that in Kent they had found exhibiting coloured editions of the development plan successful. This was done before the final adoption of the plan by the Minister, so that they could tell the people that they could express their views on the plan. With regard to the pollution of the atmosphere by the extraction of surface minerals, the solution of the problem must be that this work was not acceptable to the people living in the vicinity.

BRITISH STANDARDS

D.B.S.J.C. Propose New Standard for Traps

EARLIER this year, representatives of the Distributors of Builders' Supplies Joint Council discussed with the Director of the British Standards Institution and some of his senior officials certain points of view regarding the preparation and use of British Standards. Arising out of this discussion and in view of the shortage of material, this Council suggested that one new and inclusive Standard should be created covering: B.S. 504 drawn lead traps; B.S. 1291 ferrous traps for baths; B.S. 1184 non-ferrous traps; and that this Standard should be based on performance, use and demand. For this purpose the Council, in agreement with the Institution, undertook a factual survey of the demand for, and use of, various types of basin, sink and bath traps obtaining in different parts of the country. The results of this survey and a draft of a proposed British Standard based upon the information supplied have now been submitted to the British Standards Institution for study and consideration.

BOOKS

THE UNSOPHISTICATED ARTS. By Barbara Jones. (London: The Architectural Press.) Price 25s. net.

THIS BOOK, as the author explains in her preface, is "about the things that people make for themselves or that are manufactured in their taste," and she discusses these in thirteen chapters, with 184 illustrations, reproduced mostly from drawings, sketches and photographs by herself. Her survey is a wide one, taking in such dissimilar manifestations of vernacular art as stuffed animals, fairground roundabouts and buildings, canal boats, piers, bandstands and other seaside furnishings, riverside bungalows and houseboats, tattooing, food decoration, dolls and dummies, toys, rustic porches, vehicles, labels, fireworks and tombstones.

Popular arts, the author explains, are "complex, unsubtle, often impermanent; they lean to disquiet, the baroque and sometimes terror." They often have an extraordinary vulgarity, too, which has successfully resisted the efforts of recent years to improve popular taste. Perhaps it has been a mistake to attempt to improve popular taste, but it is surely no less a mistake to elevate it into a cult, and there is a tendency to do so. Not that our author does this; she is admirably objective, and writes well and with authority. Many of the things illustrated, of course, have a naïve charm—the baroque roundabout and the painted decorations of canal boats, for example—and the human scene will be the poorer if they ever die out, as they well may. Other things, however, like riverside bungalows and rustic porches, are often hideous, and no tears should be shed over their disappearance. We commend the author's industry in drawing and describing so faithfully such a variety of examples of popular art, if only as a record and a warning of the horrid depths to which unsophistication can sometimes sink.

G. J. H.

ENGLISH MEDIEVAL SCULPTURE. By Arthur Gardner, M.A., F.S.A. (London: Cambridge University Press, Bentley House, 200, Euston-road, N.W.1.) Price 55s. net.

THIS BOOK is a revised and enlarged edition of *A Handbook of English Medieval Sculpture*, published in 1935, which itself was an abridged edition of *Medieval Figure Sculpture in England*, by the late Professor Edward S. Prior and Arthur Gardner, published in 1913, a standard work on the subject. Since 1935, as the author says in his preface, various things have occurred which add to our knowledge of medieval sculpture, and a number of new publications have thrown light on some of the problems or revealed the results of patient research. He ranks as perhaps the most important event the exhibition at the Victoria and Albert Museum of the sculptures from Westminster Abbey, which, temporarily removed for security reasons during the war, have on close examination helped to increase our knowledge and appreciation of the work of the last period of medieval sculpture. Other events have been Dr. Hildburgh's donation of his great collection of alabaster carvings to the museum, and the coming to light of a few early carvings of Saxon date. This new edition, therefore, which includes about 180 fresh illustrations (683 in all), gives an up-to-date and comprehensive survey of the whole subject, from the pre-Conquest period through the Norman, Early English, Decorated, and late Gothic or Perpendicular periods.

The destruction of so much religious carving by the Puritans deprived our churches of much of their richness; what is left, and it is a considerable wealth, consists mainly of architectural and monumental sculptures, which owe their preservation to inaccessibility or to their real or imagined secular intention. A wonderful variety of these is illustrated, reflecting the diversity of motif employed, the varying skills of the craftsmen, mostly anonymous, and the changing conditions of the succeeding generations. All medieval sculpture, like that of the Greeks, was originally coloured, and Professor Gardner suggests that we may gather an impression of what it must have looked like by turning to the illuminated manuscripts of the period. The whole façade of Wells Cathedral, for instance, "must have resembled a colossal reredos, glowing with brilliant colours and of a splendour we can hardly imagine."

This must remain the indispensable handbook for all students of medieval sculpture—scholarly, illuminating, and eminently readable in its text, superb in its illustrations, and beautifully produced.

G. J. H.

PRINCIPLES OF QUANTITY SURVEYING. Second Edition. By R. D. Wood, D.Sc. (The Estates Gazette, Ltd.) Price 40s. net.

BUILDING QUANTITIES. Second Edition. By J. H. Anderson, F.R.I.C.S. (Edward Arnold and Co.) Price 10s. 6d. net.

THERE APPEARS to be little, if any, diminution in the number of students presenting themselves for the professional examinations in quantity surveying, with the result that the call for books connected with quantity surveying subjects is steadily maintained. Here are two books now appearing in second editions, and in each the author has the qualification of years of experience in teaching technical subjects.

Mr. Wood's first edition appeared in 1948 and was well received; it was what is claimed to be—a methodical introduction to the principles of quantity surveying. The new edition contains two new chapters, instructions on the taking off of a deal staircase and internal plumbing, both commendable in clarity and exposition. One might, however, take exception to the suggestion in the staircase chapter that there is a *precept* for obtaining the girth of treads and risers in the formula 2R + T = 23, and that consequently, if the total rise and number of risers are given the "going" is automatically derived. But what if site conditions dictate a specific width of tread? Surely this is the architect's prerogative, and the drawings should take precedence over any formula.

Another statement that should be taken with reserve is that on page 363, where Mr. Wood says that it is unusual to make adjustments on wall plastering and decorations for the area occupied by skirtings. If we take, for example, a block of 100 flats with 7-in. skirtings throughout and high-class decorations, the failure to make this adjustment would represent a very substantial sum of money in favour of the contractor.

Mr. Anderson's is a slimmer volume, of which the first edition was dated 1946; its title, "Building Quantities," is intended to convey that its appeal is primarily to students not engaged in professional offices, but who require the rudiments of quantity surveying technique and the ability to take off up to a certain standard. This need not, however, deter students whose ultimate aim is the professional side, for this tidy little work is not by any means "builder's quantities." It is firmly based on the S.M.M., and the 32 examples are derived from detail drawings (given) of three complete buildings. In this respect Mr. Anderson's work has the advantage over Mr. Wood's, in which the examples are not integral parts of one building that can be united in the orderly presentation of a full take-off.

Faced with two books on one subject, and the authors both from the technical schools, should one risk to tread the slippery path between the capricious and the invidious, and dare to be choosy? Then I would say that Mr. Wood's work would be the better adapted for use as a class textbook, whilst Mr. Anderson's would be better suited to those studying at home, or for that matter in the train, for it is more direct in approach than Mr. Wood's, and has the added advantage of being of pocket size.

And as a final poser let us ask is it proper for a teacher of quantities (as opposed to a mere practitioner) to take it upon himself to criticise the Standard Method? Mr. Wood does not hesitate to do so when he tells us, for example, that he does not approve of the measurement of brick arches by the foot run, as amended in the S.M.M. 1948 edition, and he boldly continues to teach the older method of measurement by the foot superficial. Mr. Anderson prefers to accept the current edition of the S.M.M. as read, and teaches the measurement of brick arches accordingly.

S. W. H.

A CONCISE BUILDING ENCYCLOPAEDIA. Compiled by T. Corkhill, M.I.Struct.E. (London: Sir Isaac Pitman and Sons.) Price 20s. net.

With the constant introduction of new machinery, materials, and techniques there is a steady expansion of technological terminology; hence the need for new editions of standard dictionaries or encyclopaedias of building, such as the one under notice, which is one of the best we know for its size and price. First published in 1932, it has been revised or reprinted several times and now appears in a third edition which has been revised, brought up to date and considerably enlarged by the addition of new entries. About 14,000 words or terms are explained, 1,200 of which are illustrated by excellent little diagrams. Mr. Corkhill, a well-known figure in the world of technical teaching, has done his job remarkably well, and though he modestly claims to do no more than assist the younger members of the various professions and crafts, we imagine there are few of its older members who will not find instruction in his book.

We have checked it at random on some scores of points and only once found it wanting: there is nothing about Time and Progress Schedules, but this omission would seem to be an exception, not the rule.

A Book for Christmas

There is still time to give a book as a Christmas gift. Books on architecture, building and allied subjects are on view at "The Builder" Book Showroom, The Builder House, Catherine-street, W.C.2. Our latest catalogue will be sent, on request, to those who cannot pay a personal visit.

M.O.W. WINTER LECTURES

January Programme

LECTURES to be given during January next in the Ministry of Works winter season of discussion-lectures on subjects of interest to the building industry are as follows:—

January 2.—"Good Practice in Plumbing," by G. Lloyd Ackers, M.I.C.E. Friends' Meeting House, Bull-street, Birmingham. 7.15 p.m. *January* 8.—"The Care and Maintenance of Plant," by C. E. Toogood, Bristol University, Royal Fort, Bristol, 8. 7 p.m. "Prestressed Concrete," by F. Walley, M.Sc., A.M.I.C.E. Gas Board's Showrooms, St. John's-square, Cardiff. 7 p.m. "The Building (Safety, Health and Welfare) Regulations, 1948," by P. R. F. Britnell. Old Shire Hall, High-street West, Dorchester. 7 p.m. "Paint—Its Manufacture and Application," by L. A. Walker, B.Sc. Technical College, Newtown-road, Hereford. 7.15 p.m.

January 9.—"British Standards and Codes of Practice for Building," by C. Roland Woods, M.B.E. Employment Exchange, Ministry of Labour and National Service, Cheylesmore, Coventry, 7.15 p.m. "Introduction to Programming and Progressing for Builders," by R. H. James. City Technical College, Byrom-street, Liverpool. 7.15 p.m. "Small Heating and Ventilating Installations," by J. C. Knight, A.M.I.H.V.E. Municipal College, Guildhall-square, Portsmouth. 7 p.m. "Prestressed Concrete," by F. Walley, M.Sc., A.M.I.C.E. Y.M.C.A., St. Helen's-road, Swansea. 7 p.m.

January 10.—"Good Practice in Plumbing," by G. Lloyd Ackers, M.I.C.E. Public Library, Corporation-street, Chesterfield. 7.15 p.m. "Prestressed Concrete," by H. Kaylor, B.Sc. South-Eastern Gas Board Showrooms, Sandgate-road, Folkestone. 7.15 p.m. "Introduction to Site Costing for Builders," by N. McKee. Technical College, Hampstead-road, Watford. 7 p.m. "The Building (Safety, Health and Welfare) Regulations, 1948," by F. O. Townsend. Woolwich Polytechnic, Thomas-street, Woolwich, S.E.18. 7.30 p.m.

January 11.—"Some Factors Influencing the Performance of Woodworking Machinery," by P. Harris, B.Sc. Town Hall, Devizes. 7 p.m. *January* 15.—"Heating and Heat Insulation," by G. D. Nash, A.R.I.B.A. Y.M.C.A., Connaught Hall, Blackett-street, Newcastle-upon-Tyne. 7 p.m.

January 16.—"Machines for the Modern Builder: Some Recent Developments in Building Plant," by A. MacNiven-Brown, A.M.I.Mech.E. Technical College, Cathedral-street, Lincoln. 7.15 p.m. "Structural Use of Steel in Building," by G. A. Gardner, O.B.E. Gas Show Rooms, Albert-square, Manchester. 7.15 p.m. "Plastering," by H. Andrews, B.Sc. Technical Institute, William-street, Slough. 7 p.m. "Paint—Its Manufacture and Application," by L. A. Walker, B.Sc. Technical College, Cauldon-place, Stoke-on-Trent. 7.15 p.m. "Housing Problems and the Architect," by F. Hedley, A.R.I.B.A. Technical College, The Green, Sunderland. 7 p.m. "Essentials of Good Concreting," by E. H. MacMillen, B.Sc. Bodhyfryd Hall, Chester-road, Wrexham. 7 p.m.

January 17.—"Economy in Traditional House Building: An Analysis of Building Costs," by N. S. F. Pippard. Guildford House, High-street, Guildford. 7.15 p.m. "Introduction to Programming and Progressing for Builders," by N. McKee. Technical College, Hempstead-road, Watford. 7 p.m.

January 21.—"Site Costing for Builders," by L. R. Abel. Wheatstone Hall (City Museum), Brunswick-road, Gloucester. 7 p.m. *January* 22.—"Some Problems of Tiled and Slated Roofs," by G. J. Langdon-Thomas, A.R.I.B.A. Public Library, Marlborough-road, Banbury. 7 p.m. "Essentials of Good Concreting," by E. E. H. Bate, M.B.E. Gas Board's Showrooms, St. John's-square, Cardiff. 7 p.m. "Lightweight Concretes," by T. Whitaker, M.Sc., A.M.I.C.E. Medway Technical College, 370, High-street, Chatham. 7.15 p.m. "Painting Traditional Buildings," by T. A. Baker. Technical College, Northgate, Darlington. 7 p.m.

January 23.—"New Timbers in Building," by B. J. Rendle, B.Sc. Technical College, Church-street, Barnsley. 7.15 p.m. "Heating and Heat Insulation," by G. D. Nash, A.R.I.B.A. Regency Hall (Weeks, Ltd.), High-street, Newport, I.O.W. 7 p.m. "Structural Use of Reinforced Concrete in Building," by A. E. Hewitt, A.M.I.Struct.E. Gas Showrooms, Lower Parliament-street, Nottingham. 7.15 p.m. "Essentials of Good Concreting," by E. E. H. Bate, M.B.E. Y.M.C.A., St. Helen's-road, Swansea. 7 p.m.

January 24.—"Modern Developments in the Use of Timber in Building," by R. M. Beswick. Brocklehurst Memorial Hall, Macclesfield. 7.15 p.m. "Introduction to Site Costing for Builders," by R. H. James. Tottenham Technical College, High-road, London, N.15. 7.30 p.m. *January* 25.—"Good Practice in Domestic Drainage," by F. J. Crabb, B.Eng., M.I.C.E. Technical College, Tonbridge-road, Maidstone. 7.15 p.m. *January* 28.—"Site Investigation," by N. W. B. Clarke, M.Eng., M.I.C.E. Technical College, High-road, Tottenham, London, N.15. 7.30 p.m.

January 29.—"Foundation Problems," by L. R. Creasy, B.Sc., A.M.I.C.E. Guildhall, Kingston-upon-Hull. 7.15 p.m. "Essentials of Good Concreting," by J. G. Veryard, A.M.I.Struct.E. Boys' High School, Queens Hill (adjacent to Railway Station), Newport, Mon. 7 p.m. "Aluminium Alloys in Building," by E. I. Brimelow. College of Building, Clarence-street, Liverpool. 7.15 p.m. "Techniques and Devices for Improving Bricklaying Output," by C. S. Thompson, A.M.I.Mech.E. Technical College, Eastlands, Rugby. 7.15 p.m.

January 30.—"Surface Finishes of Concrete," by J. G. Wilson, A.R.I.B.A. Technical College, Queen-street, South, Huddersfield. 7.15 p.m. "Essentials of Good Concreting," by J. G. Veryard, A.M.I.Struct.E. Hope Church Vestry, High-street, Merthyr Tydfil. 7 p.m. "Structural Use of Steel in Building," by G. A. Gardner, O.B.E. Kirby Girls' Secondary Grammar School, Roman-road, Middlesbrough. 7 p.m. "Structural Uses of Timber," by P. L. Money. Civic Centre, Southampton. 7 p.m.

January 31.—"Machines for the modern builder: some recent developments in Building Plant," by A. MacNiven-Brown, A.M.I.Mech.E. Technical College, Abbey Foregate, Shrewsbury. 7.15 p.m. "Maintenance of Builders' Mechanical Plant," by H. E. Hodgson. Technical College, Hempstead-road, Watford. 7 p.m. "Principles of Sound Plumbing," by R. V. Lindsley, A.R.I.C.S. Technical College, 159, Tadcaster-road, York. 7.15 p.m.

A BUILDING QUIZ

The Answers

HERE are the answers to the Twenty Questions which formed the Building Quiz (see page 867). The prize-winners were listed in our last issue.

1.

(*a*) Amalgamated Society of Woodworkers.
(*b*) British Standard Specification.
(*c*) Central Land Board.
(*d*) National Joint Apprenticeship Board.
(*e*) Royal Society for Prevention of Accidents.

2.

(*a*) Queensland, N.S.W., Australia.
(*b*) Canada and U.S. (Pacific Coast).
(*c*) British Guiana.
(*d*) W. Australia.
(*e*) S. Brazil.

3.

(*a*) Graham Henderson.
(*b*) Stephen Hudson.
(*c*) Luke Fawcett.
(*d*) David Eccles.
(*e*) Walter Monckton.

4.

(*a*) Painter.
(*b*) Bricklayer.
(*c*) Plasterer.
(*d*) Plumber.
(*e*) Slater.

5.

(*a*) Upper member of a capital.
(*b*) Bell tower.
(*c*) Altar canopy.
(*d*) Prehistoric stone structure.
(*e*) Convexity of a column or shaft.

6.

(*a*) Common fir.
(*b*) Synthetic resin/plastic.
(*c*) Corundum/alumina.
(*d*) Lead.
(*e*) Obscured glass.

7.

(*a*) War Damage Commission (claim form).
(*b*) M.O.W. standard form of contract.
(*c*) Building licence application (small dwellings).
(*d*) M.O.W. monthly return (contractors).
(*e*) Timber licence (application form).

8.

(*a*) Approx. 80.
(*b*) Approx. 420.
(*c*) 36.
(*d*) 4.68.
(*e*) 2,640.

9.

(*a*) St. James's Palace.
(*b*) Chiswick.
(*c*) Greenwich.
(*d*) Chelsea.
(*e*) Brighton.

10.

(*a*) Steel tube.
(*b*) Slate.
(*c*) Limestone.
(*d*) Glass.
(*e*) Bricks.

11.

(*a*) G. Val Myer.
(*b*) Arthur Blomfield.
(*c*) Ralph Tubbs.
(*d*) Giles Gilbert Scott.
(*e*) G. Grey Wornum.

12.

(*a*) Not exceeding.
(*b*) Return, fill and ram.
(*c*) Render, float and set.
(*d*) Raking, cutting and waste.
(*e*) Salt glazed, stoneware.

13.

(*a*) Blue lias lime.
(*b*) Plumber's mate.
(*c*) Water storage.
(*d*) Tile creasings.
(*e*) Made-up ground.

14.

(*a*) Near Athens.
(*b*) Granada.
(*c*) Rome.
(*d*) Athens.
(*e*) Venice.

15.

(*a*) Crimson.
(*b*) Blue.
(*c*) Green.
(*d*) Yellow.
(*e*) Red.

16.

(*a*) Georgian.
(*b*) Gothic Revival.
(*c*) Norman.
(*d*) Renaissance.
(*e*) Modern Byzantine.

17.

(*a*) Bucknalls Lane, Watford, Herts.
(*b*) 48, Bedford Square, W.C.1.
(*c*) 82, New Cavendish Street, W.1.
(*d*) 11, Weymouth Street, W.1.
(*e*) 26, Store Street, W.C.1.

18.

(*a*) Lead pipe.
(*b*) Gold leaf.
(*c*) Sheet glass.
(*d*) Round-headed screws.
(*e*) Aggregate.

19.

(*a*) Surveyor's chain.
(*b*) "The Builder."
(*c*) The Building Exhibition.
(*d*) Engineers' handbook.
(*e*) Anti-corrosion solution.

20.

(*a*) Decks.
(*b*) Bill.
(*c*) Dice.
(*d*) Way.
(*e*) Pace.

CODES OF PRACTICE

Electrical Fire Alarms

THE Council for Codes of Practice for Buildings has now issued in final form Code 327.404/402.501, "Electrical Fire Alarms." It was drawn up by a committee convened jointly on behalf of the council by the Institution of Mechanical Engineers and the Institution of Electrical Engineers, and the present code is a revision of the draft previously issued for comment.

The code deals with the installation in buildings of electrical fire alarm systems, including manual call points and automatic fire detectors. It excludes public fire-alarm systems and alarms forming part of automatic sprinkler installations.

Advice is given on the necessary consultation at the planning stage and on the choice of materials, appliances and components; and recommendations follow regarding the design of various types of systems, methods of wiring and power supply, and the provision of the necessary structural accommodation for the equipment and wiring. Sections on inspection and testing and on maintenance are included.

The price is 5s., post free.

Dense Concrete Walls

THE Council for Codes of Practice for Buildings has now issued in final form Code 123.101, "Dense Concrete Walls" (price 4s., post free). This code, which was prepared by a committee convened by the R.I.B.A. on behalf of the council, should be read in conjunction with Code 111, "Structural Recommendations for Loadbearing Walls," and Code 111.201, "Concrete Cast In-Situ." It deals with the construction of solid and cavity walls of dense concrete (as distinct from lightweight or no-fines concrete), both plain and reinforced. Recommendations are made regarding the type and quality of materials, the proportioning and mixing of the concrete, and the control of shrinkage. The provision of expansion joints, to avoid failures arising from thermal movement, is dealt with and details for typical joints in walls are illustrated.

Full information is given on surface finishes and damp-proof courses, and detailed recommendations are made in respect of setting out, scaffolding, and formwork on site.

The code includes illustrations of the damp-proofing of various types of walls, openings, roofs and chimney stacks. Thermal transmittance co-efficients for both solid and cavity walls with various linings and finishes are tabulated, as are some average values of sound reduction for different thicknesses of wall.

Copper Coverings for Roofs

THE Council for Codes of Practice for Buildings has now issued in final form Code 143.104, "Copper Coverings for Roofs." Drawn up by a committee convened by the Royal Institute of British Architects on behalf of the Council, the code is a revision, following comment received, of the draft previously issued.

This code deals with copper sheet coverings for roofs, including such flashings and gutters as are an integral part of the roof construction. Recommendations are made for the selection of sheeting, and detailed information is given regarding the technique of laying and the preparatory work entailed. Attention is paid to the fashioning of the sheeting in the covering of rolls and square abutments, the provision and placing of parapet gutters and outlets, and the use and spacing of clips. Many of the details associated with the laying of the roofing are illustrated in a series of drawings. There are appendices dealing with gauges, thicknesses and weights of copper sheet, and the physical properties of copper. The price is 4s., post free.

Masonry Walls

THE Council for Codes of Practice for Buildings has now issued in final form Code 121-201 (1951), "Masonry Walls Ashlared with Natural Stone or with Cast Stone," (price 6s.). The Code has been drawn up by a Committee convened by the Royal Institute of British Architects on behalf of the Council, and is a revision, following comments received, of the draft code previously issued.

The Code deals with the materials for and the design and construction of masonry walls of the type indicated in the title.

Recommendations are made on the selection of natural and of cast stone, and on materials suitable for damp-proof courses and for mortar. Full consideration is given to various points affecting the design of the walling in relation to the exclusion of rain penetration, durability, sound insulation, thermal movement and bonding; recommendations follow on the provision and placing of damp-proof courses, the use of hollow wall construction, and on the preparation of mortar. Many details associated with the construction are also dealt with, for example, bearings, parapets and their protection, footings and surrounds to openings. An "Alignment" chart for the computation of thermal transmittance of various types of masonry walls with linings is included in the appendices.

Some of the methods of construction recommended, and the positions of damp-proof courses, are illustrated in the diagrams. General notes regarding post-contractual maintenance, together with repair work to defective stonework, are included.

Asbestos-Cement Roof Coverings

THE Council for Codes of Practice for Buildings has issued Code 143.201:1951, "Asbestos-Cement Sheet Roof Coverings."

This code deals with the various types of corrugated asbestos-cement sheeting used as coverings for roofs, generally of a pitch of not less than 25 degrees. It gives information on the effectiveness of the material as regards durability, weather resistance, thermal insulation, fire hazard and condensation, and advises on design in general. Recommendations are made on methods of fixing the sheets, the treatment of eaves and verges, top-edges, abutments and the provision of gutters, rainwater pipes, walkways and roof-boards.

Tables are included giving the dimensions of both straight and curved sheets, and of laps; also the weights and purlin spacing of the standard sized sheets. The co-efficients of heat transmittance for various types of corrugated sheet coverings with and without underlays, ceilings and linings, are also given. The price is 3s., post free.

Details of work on site include advice on the storage, cutting, laying and fixing of sheets, and on the treatment of hips and valleys. The code includes sections on the inspection, testing and maintenance of roof coverings, and diagrams to illustrate certain features of construction.

Timber Flooring

THE main parts of Code 201:1951, "Timber Flooring," deals with the subject in general. Parts 2, 3 and 4 deal respectively with board and strip flooring; wood block; and plywood, overlay and parquet flooring.

Part 1 surveys the general principles of design for timber flooring, the essential factors to be considered in the choice of timber for a particular situation, and the precautions to be observed in laying on suspended sub-floors and on solid sub-floors in direct contact with the ground. Particular reference is made to the prevention of dry rot and advice is given on treatment with preservatives, seasoning and on prevention of moisture penetration.

Parts 2, 3 and 4 deal specifically with the particular types of flooring, and give guidance on the preparation of the base and details of laying and fixing. The price is 3s. 6d., post free.

Staff Location Systems

THE Council for Codes of Practice for Buildings has now issued in final Code 327.402, "Staff Location Systems" (price 3s., post free). This code has been drawn up by a Committee convened by the Institution of Electrical Engineers on behalf of the Council, and is a revision, following comments received, of the draft code previously issued. It forms part of the series concerning telecommunication services in and about buildings, and deals with the installation of systems which provide audible or visual signals for attracting the attention of an individual who may be anywhere in a building or on a site.

Copies of these codes may be obtained from the British Standards Institution, 24-28, Victoria-street, London, S.W.1.

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NATIONAL FEDERATION

"Building Incentives Have Come to Stay"

ADDRESSING the Liverpool Regional Federation of Building Trades Employers on December 14, MR. STEPHEN HUDSON, national president, said: "I suggest that those who were disappointed by the figures contained in the recent report of the Ministry of Works on bonusing in the building industry did not take sufficient account of the difficulties with which the industry has been faced since the time—a few years ago—when the trades unions agreed for the first time to incentive payments being given a fair trial, as an experiment. At no time during that period has the industry been able either to rely on an adequate supply of materials or to be certain that there would not be cuts in the building programme."

The N.F.B.T.E., which had done a lot to popularise the adoption of incentive payments, regarded the report as encouraging and would intensify its efforts, Mr. Hudson continued. It was clear that incentive payments, whilst still in the experimental stage, were spreading and that they had come to stay.

"I am sure that when the supplies of materials improve, and when a long-term building programme in which all sides of the industry can have confidence is laid down, the proportion of jobs which are bonused will increase substantially. In the meantime a joint committee of employers and operatives is keeping a close watch on the experiment and, if improvements are found possible, they will be made without delay. Our aim is the effective use of more materials and, therefore, the erection of more buildings by the same labour force as that at present employed," the president added.

Plasterers' Federation

MR. H. HUMBER, of London, has been elected president of the National Federation of Plastering Contractors for 1952. Mr. J. L. Phillips, of Leeds, and Mr. R. A. Atkin, of Cardiff, have been elected senior and junior vice-presidents, respectively.

At the annual general meeting of the Federation in London on December 11, the retiring president, Mr. P. C. Crotch, of Norwich, reported that membership now numbered 800. The Federation, he said, was paying particular attention to the recruitment of apprentices and he appealed to all members to acknowledge and act upon their responsibilities in this field.

The Federation is affiliated to the N.F.B.T.E.

Registered House-Builders

MR. C. DOUGLAS CALVERLEY, of Leicester, has been re-elected president of the Federation of Registered House-Builders for 1952. Mr. H. Spencer, J.P., of Preston, and Mr. R. W. Whittington, of Southampton, have been re-elected senior and junior vice-presidents, respectively. The federation is affiliated to the N.F.B.T.E.

Employment in the Building Industry

It is estimated that there was little change in the size of the total working population during October. The number employed in the building and contracting industries at the end of October was 1,448,000, a decrease of 4,000 compared with the previous month, according to figures issued by the Ministry of Labour and National Service.

L.M.B.A.

President's Christmas Message

IN a Christmas message to his area chairmen, which he has asked them to pass on to their members, the president of the L.M.B.A., Mr. Dudley F. Cox, writes: We live in times which continue to be troublous. The rearmament programme has again complicated a future in which we had hoped to return to more reasonable conditions. Nevertheless, I am sure we shall meet those troubles with energy and competence, and it is gratifying to note that our new Government has been able to restore some measure of freedom to allow us to make our contribution to the housing problem.

I think we may look back on 1951 as a year of real progress and achievement. You are aware of the especial importance I have attached to apprenticeship, and I am sure that not only have we emphasised to our fellow-employers the vital importance of training the craftsmen of the future, but we have also awakened in everyone a sense of urgency of the importance of dealing with the problem now.

"1951 a Year of Progress"

SOME 50 M.P.s, town clerks, borough surveyors and representatives of Government departments attended the recent annual luncheon of the L.M.B.A.'s No. 3 Area in the Connaught Rooms. Mr. B. L. Morgan, J.P., chairman of the area, presided.

Mr. Harmar Nichols, M.P., proposed the toast of the Association, and the president, Mr. Dudley F. Cox, replied.

MR. COX said that they could look back on the year 1951 as one of definite and satisfactory progress, and could claim with confidence that the L.M.B.A. continued to go from strength to strength, faithfully preserving its position as the representative association of building trades' employers in London in all negotiations with Government departments and with the operatives.

Referring to apprentices, Mr. Cox said in the past London had been the mecca for the provincial craftsman. To-day that was no longer the case; London must, therefore, make its own provision for training its craftsmen. That they were doing. As a result, they had obtained, and in most cases filled, several hundred vacancies for apprentices in the London region. Co-operation had been close with the operatives and also with the youth employment officers, who were made aware of vacancies available and so linked up supply and demand.

Above all, said Mr. Cox, they had created in regard to apprenticeship a feeling of deep responsibility and of urgency in London employers. Their task was not completed. Far from it. It was only just beginning. They had much lee-way to make up, and should, perforce, have to keep apprenticeship before them as a very vital issue.

"I have rarely met an employer who, having once trained apprentices, has not realised what gratification it brings, the satisfaction of watching the young man develop his skill under his care, the loyalty to his master which inevitably develops between apprentice and willing master, and may I say, the not unimportant realisation that as an employer he is discharging a duty to his trade and is putting something into that trade as opposed to what he is taking out," Mr. Cox added.

Mr. J. E. Fishwick, town clerk of Finsbury, replied to the toast of the guests, proposed by Mr. R. H. Willard, senior vice-president of the area.

Educational Grants

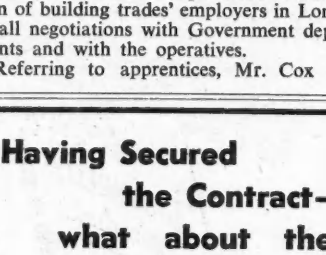
COMPLETING its educational grants for the year, the L.M.B.A. has sent the following donations to apprentices' prize funds:—

London Association of Master Stonemasons, 10 gns.; City and Guilds of London Institute, 5 gns.; East Ham Technical College, 5 gns.

Next year the new L.M.B.A. "medal" awards come into force, and will largely supersede money donations.

The L.M.B.A. has also sent a donation of 20 gns. to the Provident Institution of Builders' Foremen and Clerks of Works.

Having Secured the Contract—what about the Steel Scaffolding?



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B.A.T.C. PRIZE AWARDS

524 Successful Apprentices

THE Building Apprenticeship and Training Council has made awards to 524 apprentices in training for outstanding ability in class and site work during the year. The awards, 159 book tokens to the value of 30s. (first prizes), and 365 of £1 (second prizes), for the purchase of technical or cultural books relating to the building industry, were made on the joint recommendations of technical colleges, employers, and local apprenticeship committees.

Every craft of the building industry is represented among the prize-winners, and the awards cover England, Scotland and Wales.

The number this year is the highest since the awards were first made in 1948, and, says the B.A.T.C., shows a satisfactory standard among boys in craft training. More than 2,000 awards have been made to date from the Council's Welfare Fund. It is hoped that these will encourage apprentices to continue to full craftsmanship and further studies for supervisory posts.

Cement Makers' Chairmanship

Sir Malcolm Trustram Eve has been appointed independent chairman of the Cement Makers' Federation.

A HOUSING DRIVE

New Association Proposed

BUILDERS representing the trade in an area stretching from Southampton to Birmingham and east to Lowestoft, met on December 12 in Luton to support a new policy of housebuilding. originally proposed by Luton and Dunstable builders. About 150 delegates pledged themselves to take the proposals back, "stump" their areas for support, and return to Luton at the end of next month to form a United Builders' and Associate Trades' Committee, with headquarters in Luton.

The Committee's object will be to further housebuilding developments on lines proposed by builders and people in allied trades. The new policy is contained in a nine-point proposal:

1. That the Town and Country Planning Act should be clarified as regards value of claims and future policy.
2. That subsidies, if still to be continued, should be granted to private investors on an equality with council housing.
3. That prices of materials should be stabilised.
4. Minimum size of houses to be 700 feet super.
5. That specification of houses generally should be reconsidered.
6. That more houses planned by builders should be built either on land owned by them or on council land
7. That permission should be given to operatives to work longer hours, overtime to be tax free.
8. That builders should be helped to make use of displaced labour.
9. If licences are to continue, the Government should issue to the builder as many as economically possible.

Mr. Harold Macmillan, Minister of Housing and Local Government, is examining the builders' proposals.

Builders' Place in Housing

The conference was held at the Town Hall, Luton, and MR. L. B. SELL, chairman of the committee putting forward the proposals, presided. He outlined the plans. Sir Thomas Keens, chairman of the Beds County Council, was among those on the platform. In the discussion which followed, COUNCILLOR H. C. JANES (Luton) said he thought private licences should be issued to builders, not to individuals. "Putting up an odd house here and there is not building," he declared. For houses to be built properly and economically, builders had to be able to plan ahead and build ahead. It was no good having to wait for people to "drift along" with their licences.

MR. M. HARRISON, of the Peter Dunham Group of Architects, said architects were in favour of the Town and Country Planning Act, provided it was simplified and "more intelligently administered."

A Southend-on-Sea builder said building had to be taken out of the hands of the local authorities. No local authority ever built a house, the builders did it.

ALDERMAN C. H. JEYES (Beds County Council) said the Town and Country Planning Act should be swept away. It was legalised thieving, he declared.

Summing up, ALDERMAN R. COLIN LARGE, Deputy Mayor of Luton, said the builders of the country were the people who had built the council houses, and they would continue to do so. "We believe we can tremendously increase council house building and provide people who want them with houses of their own. We shall combine the job," he said.

Before the conference delegates met for lunch at the George Hotel, Luton. Among those present was MR. NORMAN COLE, M.P. for South Beds. He told the delegates no one wanted to go on seeing the terrible problem of housing as it was to-day. The only difference of opinion was in the method of solving the problem.

Mr. Cole gave this advice: "Make practical suggestions which can be used and fitted into the framework of the whole matter."

TIMBER LICENCES

Simplified Procedure

SIMPLIFIED PROCEDURE for obtaining timber licences is explained in a circular (No. 76/51) issued to local authorities by the Ministry of Housing and Local Government.

As from January 1 next, the licensing periods will be of six months—January to June, and July to December—instead of three months. Licences for each of the half-yearly periods will be issued to meet a consumer's need during that licensing period; and he will, as now, be entitled to acquire timber under that licence up to 15 days after the end of the half-year covered by the licence.

The special concession announced in Circular 97/50—dispensing with the need to apply for a fresh licence for timber included in a licence issued during the preceding quarter, but not acquired—will be withdrawn as regards licences issued for 1952 and subsequently. This concession will apply to licences for the acquisition of timber in the present quarterly period ending December 31, 1951, but for no longer.

For the present, existing supplies of form T.C.3/8/CPL (3rd Revision), suitably amended, will be used until stocks of the revised form are available. Applications by housing authorities for the amended forms should be sent to the appropriate regional office of the Department.

BOOKS FOR BUILDERS

HOW TO ESTIMATE
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The *new 11th edition* has been brought up to date to September, 1950, with tables giving cost increases for materials and labour for 1936-7, 1939 and 1944-50. Over 680 illustrations.
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HANDLING CEMENT IN BULK

New Portable Equipment

ONE of the aspects affecting the supply of cement is the scarcity of paper for making cement bags. It is probable that adequate supplies of cement will only be available where part, at least, of a user's requirements can be taken in bulk. To meet this situation, Road Machines (Drayton), Ltd., West Drayton, Middlesex, have developed an equipment for handling cement in bulk for the user with moderate consumption requirements, whether on the construction site, or in the precast concrete factory.

The equipment takes the form of standardised, portable units which provide for a consumption of 1-3 tons of cement per hour and for storage in units of 8 and 12 tons capacity. The storage units can be duplicated where necessary to provide a greater reserve.

The equipment includes an 8-ton floor receiving hopper from which cement is carried in a stream of air under pressure of 90 lb. per square inch to a dispensing hopper of 10 cu. ft. capacity or to a mobile silo of 12-ton capacity. From the dispensing hopper, cement can be drawn off by gravity.

The air consumption required to handle cement from the receiving hopper will, naturally, vary according to the rate of discharge, the horizontal distance through which the cement is to be carried and the vertical lift. It is claimed that a 2-tool compressor which is frequently already available in a contractor's plant, will cover maximum requirements.

OFFICIAL NOTIFICATIONS

Iron and Steel Scrap Drive to be Intensified

The Minister of Supply (Mr. Duncan Sandys), the steel industry and the scrap merchants have decided, in view of the gravity of the steel scrap situation, to intensify the scrap drive in 1952. Discussions have taken place between the Minister, officials of the scrap drive organisation of the iron and steel industry, and the president, chairman and members of the Management Committee of the National Federation of Scrap Iron, Steel and Metal Merchants. The Minister will give full support to measures undertaken by the industry or scrap merchants to increase scrap supplies.

Non-Ferrous Scrap Prices

The Minister of Supply (Mr. Duncan Sandys) has made an Order bringing secondary unwrought copper under price control and reducing the controlled prices of secondary copper alloys. The copper prices will be equivalent to the Ministry of Material's selling prices of virgin copper, and, to permit the production of refined copper at these prices, the prices of copper scrap are being reduced by £8 a ton. Prices of copper alloy scrap are being reduced in proportion to the copper content. The Order—the Non-Ferrous Metals Prices (No. 9) Order, Statutory Instrument 1951 No. 2174—is on sale at H.M. Stationery Office, price 4d.

Imports of Wood Wool and Wood Wool Rope

Importers desiring to import wood wool and wood wool rope from the O.E.E.C. countries during the first half of 1952 are invited to apply for import licences.

Applications (on Form ILB/A Rev) should be sent to the Import Licensing Branch of the Board of Trade not later than December 31. No assurance can be given that applications will be licensed in full.

NEWS IN BRIEF

Course on Prestressed Concrete

The Brixton School of Building, Ferndale-road, S.W.4, is to hold a course of lectures on pre-stressed concrete. This course commences on January 9 next, and particulars may be obtained from the secretary, to whom applications should be made.

New Dollar Exports Council

As a result of industry's plans for a renewed effort to increase dollar exports, a new Dollar Exports Council has been formed. The Council will maintain contact as required with the Canadian and American Chambers of Commerce in Great Britain. The address of the Council's executive offices is 41, Buckingham Palace-road, S.W.1.

Engineer's Appointment

Mr. Robert E. Normanton, Deputy Borough Engineer of Greenock since 1949, has been appointed deputy borough engineer for Southport in succession to Mr. E. G. King, who is leaving to take up an appointment as borough engineer of Edmonton. Mr. Normanton was formerly chief assistant engineer at West Ham.

Building Research Congress

Books containing the papers presented in the three divisions of the recent Building Research Congress are obtainable, price 22/6d. each or 50/- for the set of three, from the Organising Secretary, Building Research Congress, 1951, Building Research Station, Garston, Watford, Herts. Early application is desirable. Members of the participating bodies may obtain single books at 17/6d. each. The record of discussion which took place at the technical sessions may be ordered now in advance of publication, price 25/- (20/- to members).

Building Society Mortgage Interest

The Council of the Building Societies Association issued a statement on November 9 saying that its attention has been drawn to newspaper statements foreshadowing an increase in the rate of interest payable on mortgage advances made by building societies for house purchase. After reviewing the present position, the council has decided to recommend no change in the rate of interest charged on these advances by building societies "While the council must obviously be guided by future trends, it is and always has been the association's endeavour to make home-ownership available at the least possible cost," the statement adds.

Manual of Commercial Timbers

Since the war a large number of new timbers have been entering the world markets. Many of these additions are new in the sense that they have not been in general productive use previously. To provide a ready source of information on these particular timbers, Dr. H. E. Desch has produced an informative loose-leaf book in which each timber is dealt with on a separate sheet, thus simplifying reference. The Manual of Commercial Timbers: Volume 1 contains facts regarding the countries of origin, character and uses, etc., of each example and is to be supplemented from time to time with additional sheets covering a further selection of 10 or 20 timbers. Copies may be obtained from 11, Haymarket, London, S.W.1, price £1 1s.

Further Education, Middlesex

A brochure which explains briefly and in general terms the facilities for further education which are provided by the council and gives a list of particular courses, activities or services available in the county, has been issued by the Middlesex County Council. Courses available in architecture and the various building trades are referred to.

Oxford Gasworks Extension

Oxford City Council has been informed by the Southern Gas Board that it will not be able to carry out the agreement reached a year ago to erect new plant on the outskirts of Oxford, near the industrial suburb of Cowley, instead of extending the riverside works. It considers that the project must be abandoned in favour of the extension of the present works, with the concession that a new water-gas holder shall be erected at Cowley; the board will consult with the Royal Fine Art Commission on the design and arrangement of the new buildings; and the old retort house on the north bank of the river will be demolished.

A report of a special meeting held in London on Monday is on page 869.

Restoration of York Minster

Work has started at York Minster on the restoration scheme which will take about nine years to complete. The stonework for the canopy which surmounts the centre portion of the west front, and for the gallery balustrade over the west window is being made ready for building operations next spring. Apart from the roof of the north transept, the Zouche Chapel has also been renovated, but the whole of the projected nine years' work on the west front and three years on the Chapter House is dependant on there being enough funds available for the task. So far £156,500 has been collected towards the target of £250,000.

Painting Woodwork

Building Research Station Digest No. 30, Painting Woodwork (Stationery Office, 2d.), imparts a great deal of useful information on the many aspects of the painting of woodwork into its six well-written pages. The Digest states that the correct application of the primer, a matter of "supreme importance," has been "sadly neglected" in recent years, and that large quantities of joinery are primed with unsuitable paints; in particular, the use of greatly adulterated products or so-called "pink primers," based entirely on leadless pigments, are condemned for external work.

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An Appointment

Colonel Harold C. Smith, C.B.E., D.L., J.P., will succeed Sir Edgar Sylvester, K.B.E., as chairman of the Gas Council, on January 1 next. Colonel Smith has been Deputy-Chairman since July, 1948.

Quantity Surveyors' Journal

Special articles in the November-December edition of the Journal of the Institute of Quantity Surveyors, which has just been issued, include a contribution on the manufacture of Fletton bricks and another on rating and valuation procedure, as indicated by the Local Government Act, 1948. News from the branches and other regular features are also given.

Joinery Workshop Management

A manual on "Joinery Workshop Management" by R. M. Hemmings, F.B.I.C.C., has recently been published by *The Illustrated Carpenter and Builder*. The manual originally appeared as a series of articles in that journal and has been published in permanent form in response to many requests. Mr. Hemmings has had long experience in the craft and he combines this with an intimate knowledge of the student's needs; he is technical director of Samuel Elliot and Sons (Reading), Ltd., joinery manufacturers, and is also senior examiner in carpentry and joinery to the City and Guilds of London Institute.

CHRISTMAS GREETINGS

WE ACKNOWLEDGE with much pleasure the many greetings cards, diaries and calendars which have reached us from the various sections of the building industry, and in return extend to all the compliments of the season. We hope that the New Year will bring a settled peace and greater opportunity to build.

The following send cards: The British Tabulating Machine Co., Ltd.; Mr. and Mrs. David Davidson; Director and Staff of the Building Centre; Holloway Brothers (London), Ltd.; Patrick Horsbrugh; Mr. and Mrs. Howard Lobb; Leonard J. Multon; Barney Seale.

Diaries come from: Association of Building Technicians; George Barker (Builders), Ltd.; Southern Counties Federation of Building Trades Employers; Warerite, Ltd.; Edward Wood and Co., Ltd.

Calendars are sent by: Marshall Andrew and Co., Ltd.; British Insulated Callender's Cables, Ltd.; Canadian Pacific Railway Co.; A. E. Farr, Ltd. (depicting the Choir, Lichfield Cathedral, from an original water-colour by Noel H. Leaver, A.R.C.A.); John Laing and Son, Ltd. (activities of the firm are illustrated from original oil paintings by Terence Cuneo, showing operations in England and South Africa); London Co-operative Society, Ltd.; Y. J. Lovell and Son, Ltd.; Mackay Industrial Equipment, Ltd. (the subject of the calendar shows a series of coloured panoramas of the American scene); Mavor and Coulson, Ltd. (the subject is a photograph of Loch Achray, Perthshire, by Robert M. Adam); L. E. Nunn, Ltd.; Pratt (Watford), Ltd.; Ribblesdale Cement, Ltd.; Stewarts and Lloyds, Ltd.; Stonart Asbestos Flooring Co., Ltd.

Also a small spirit level from Horsley, Smith and Co. (Hayes), Ltd.

IMPORTATION OF SOFTWOOD

Reversion to Private Trading

FROM January 1 next, all softwood buying overseas will be done by private traders, who were only partially responsible for imports in 1951, the Ministry of Materials announces. The detailed arrangements, which have been sent to members of the softwood trade, are summarised below.

It will be recalled that on November 14, 1951, Viscount Swinton, who is in charge of the Ministry of Materials, announced in the House of Lords that he was completely satisfied that the whole of the buying of softwood should now be restored to private traders and that he had instructed the Timber Controller to discuss this with the Timber Trade Federation.

The main features of the resulting scheme are as follows:—

From January 1 the import of softwood by private traders will be permitted from all sources within a "global" limit. Timber Control will take delivery of the balance of its existing contracts, but will not place any more.

The total imports in 1952 will be limited to an amount necessary to maintain the present rate of consumption and to provide necessary commercial stocks. The amount of sawn softwood expected to be imported privately during the year is estimated on this basis to be about 600,000 standards. Import licences for an initial total quantity of 350,000 standards will be issued as soon as possible. Licences will be given to persons or firms in proportion to the quantity of softwood which they have purchased under this year's arrangements.

The strategic reserve of timber so far accumulated will not be disposed of without consulting the trade.

The present regulations regarding the acquisition and consumption of softwood will continue in force, but as from January 1 consumption licences will be issued every six months instead of every quarter. The Minister of Materials has personally informed the Softwood De-Control Committee of the Timber Trade Federation that this is not to be construed as a relaxation of the softwood licensing system, which will continue to be strictly enforced.

NEW COMPANIES

THE FOLLOWING NEW COMPANIES, registered in England, have been announced by Jordan and Sons, Ltd., company registration agents.

Fuller and Finney, Ltd. (501254). Regd. Nov. 13, 257, Hobmoor-rd., Small Heath, Birmingham, 10, bldrs., contractors, etc. Nom. cap.: £200. Dir.: G. A. Fuller, 174, Malmesbury-rd., Small Heath, Birmingham, 10.

T. C. Hilton (Builders), Ltd. (501332). Regd. Nov. 14, 161, Tamworth-rd., Kingsbury, Tamworth. Nom. cap.: £5,000. Dir.: T. C. Hilton.

Housden (Builders), Ltd. (501295). Regd. Nov. 14, Carberry Works, Carberry-rd., Upper Norwood, S.E.19. Nom. cap.: £2,000. Dir.: H. W. E. Housden, 19, Biggin Way, West Norwood, S.E.19.

Eric S. Dixon, Ltd. (501351). Regd. Nov. 15, Midland Bank-chbrs., Exeter, bldg. contractors, etc. Nom. cap.: £9,000. Dir.: E. S. Dixon, 90, Monks-rd., Exeter.

Redwall Building Contractors, Ltd. (501432). Regd. Nov. 16, 239, Whitechapel-rd., E.1. Nom. cap.: £1,000. Dir.: R. E. Nardi, 3, Sheffield-cl., Potton, Beds.

J. and A. Oliver, Ltd. (501423). Regd. Nov. 16, 91, North Seaton-rd., Ashington, bldrs., contractors, etc. Nom cap.: £2,000. Dir.: J. H. Oliver, 7, Beech-ter., Ashington, Northumberland.

Kent and Sussex Contractors, Ltd. (501424). Regd. Nov. 16, 109, Station-rd., Sidcup, Kent, bldrs., contractors, etc. Nom. cap.: £1,000. Dir.: K. P. Rush, 21, Forest Ridge, Keston, Kent.

Whitbread Bros. (Builders), Ltd. (501337). Regd. Nov. 14, 4, Florence-st., Islington, N.1. Nom. cap.: £160. Dir.: A. H. Whitbread, 28, Essex-rd., N.1.

TRADE NEWS

Progress in Aluminium Alloy Forgings

High Duty Alloys, Ltd., Slough, Bucks, have issued a booklet entitled "Aluminium Alloy Forgings—A Note on Progress." This is a reprint of a paper by C. Wilson, Ph.D., A.R.S.M., the company's production metallurgist, which appeared in the June and July, 1951 issue of *Light Metals*.

Anti-Corrosive Coatings

An illustrative booklet dealing with Ritolastic anti-corrosive coatings has been issued by Andrew Maxwell (The Liverpool Borax Co., Ltd.), Maxwell House, St. Pauls-square, Liverpool, 3. Coloured as well as black finishes are provided and these have been processed with high percentages of special bitumens. The booklet contains information of the application of these bituminous coatings.

Care and Maintenance of Baths

The British Bath Manufacturers' Association, Ltd., 145, St. Vincent-street, Glasgow, C.2, have produced a folder and leaflet with the object of reducing to a minimum the loss and damage to cast iron, porcelain-enamelled baths, whether arising in transportation, installation or use. The three-page folder deals with matters affecting the builder and plumber, whilst the leaflet deals with matters of interest to the householder.

New Tube-Bending Machine

The introduction of a new 4-in. model motorised hydraulic tube-bending machine has been announced by Chamberlain Industries, Ltd., Staffa Works, Staffa-road, Leyton, London, E.10. This machine has the same design features and available power as the 2-in. model, but a larger forming head allows the bending of cold and unloaded steel tubes from ⅛-in. to 4-in. and also ¼-in. to 2-in. electrical conduit tubing. An easily fitted attachment can bend flat M.S. bars up to 7 in x ½ in. section. The machine power of both models is provided by hydraulics under finger-tip control.

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THE SCOTTISH BUILDER

Scheme for Woodpulp Industry

THE POSSIBILITY of launching woodpulp industry operations in Scotland has been continuously under review over the past few months and has been the subject of periodic reports by various interested bodies.

Inquiries in Glasgow suggest that the development of such an industry revolves round the volume of thinnings which might be expected in the future and on the prior claims on these thinnings—as, for instance, for pit props and other essential uses, to which a considerable amount of timber is already being devoted.

Because of these considerations it is unlikely that a large-scale industry can be anticipated in the initial stages, despite the fact that consumers such as the paper-making and rayon industries are known to be interested. The line of development visualised at present is that a small-scale industry might be launched to utilise such thinnings as are available. What products might be attempted is as yet uncertain, but there are hopes that chipboard, or similar materials might be attempted first.

The ultimate aim is a large-scale industry producing raw materials for those native industries which use woodpulp and, at a later date, the expansion of the field to cover all and any such developments as appear economically sound and likely to benefit the country.

Large Factory Project

THE ANNOUNCEMENT that British Celanese, Ltd., are interested in a five-acre site on the River Dee in Aberdeenshire has encouraged hopes that a new industry may be launched in that area. The firm is understood to have an 18-month option on the site which is in well-wooded and watered country. So far, no positive data have been offered by any of the interests involved and it has been emphasised that the entire project is at a very preliminary stage.

The proposals envisage a £6,500,000 factory between Banchory and Aberdeen at Drum, on ground near the river. The importance of an adequate water supply has been stressed and is understood to have been a major factor in the taking of the option.

One point which would inevitably arise would be pollution of the river by trade effluent, but this could, no doubt, be overcome by suitable planning of effluent purification.

The company concerned deals in textiles, plastics and chemicals, and so far no indication has been given as to the product likely to be involved.

Import of Timber Houses

THE DECISION to import timber houses from Scandinavia to supplement Scottish building has been criticised by Mr. R. G. Tarran.

His criticism is based on the waste of shipping space which these cargoes will involve. It would be better policy, he suggests, to import the timber and machine it and make it into houses in this country. At present the Board of Trade is allowing export of timber houses made in Britain while importing timber houses from abroad to meet our own needs.

The Department of Health for Scotland has circularised local authorities to ascertain how many houses will be wanted. They are two-storey semi-detached cottage type of four apartments suitable for erection in groups of 20 or more, and were illustrated in our last issue. Local authority

reaction has been prompt and yet cautious. While anxious to secure the houses, they are equally anxious to avoid landing themselves with a white elephant. Acceptances have, therefore, been conditioned by requests for an assurance that the houses are both stable and durable. There has been some expression of dissatisfaction regarding outside walls construction.

Ayr Burgh are to ask for 74; St. Andrews 20; Dundee 850; Wick 20; Annan 30; and Edinburgh 500. The Burghs of Greenock, Largs and Dunoon have agreed not to accept the offer.

NEW BUILDINGS

Arbroath.—Dean of Guild has approved plans for 19 low-cost municipal houses in Arbroath at a net cost of £1,119 each.

Bute.—C.C. to build 12 houses at various sites on the Isle of Bute.

Bute.—Bute C.C. to erect 12 flatted-type houses at Port Bannatyne, and 8 3-apartment houses at Kilchatten Bay. A. H. Wood, County Clerk, County Offices, Rothesay.

Drum.—A project has been mooted by British Celanese, Ltd., to build a £6,500,000 factory at Drum between Banchory and Aberdeen. The project is understood to be in its preliminary stages.

Eyemouth.—T.C. propose reconstruction and conversion of existing property at Renton-ter. to provide 15 flatted houses.

Perth.—T.C. propose erection of 24 aged persons' houses at Letham housing development site.

Perth.—Joseph Gartshore and Co., Ltd., grain merchants, Stirling, are planning a new warehouse, store and distributing centre at The Shore, Perth. Perth Town Council has approved.

Perth.—Letham housing development involves a group of 24 houses for aged persons. Prospective tenderers are to register immediately with Robt. Adams, Town Clerk, City-chbrs., Perth.

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

DECEMBER 28.

***†Ammanford U.D.C.**—64 houses and 12 flats, also roadworks, etc., Bishop-rd. estate. E. & S. Dep. £3 3s. (each).

***†Wandsworth B.C.**—296 maisonettes, 56 houses, 18 aged persons' flats and six shops, Putney Vale estate. T.C.

DECEMBER 31.

***Macclesfield B.C.**—Two bungalows and an aged persons' meeting hall, Weston. Boro' A., 3, Jordangate. Dep. £2 2s.

JANUARY 3.

***†Enfield U.D.C.**—18 houses, Glenbrook South site. E. & S., 7, Little Park-gdns. Dep. £2 2s. Tenders by January 21.

JANUARY 4.

***†Wandsworth B.C.**—112 flats and maisonettes at Coventry Hall, Streatham High-rd. R. J. Jerman, Clerk, Municipal-bldgs., S.W.18.

JANUARY 7.

***Dunstable Boro'.**—Interior redecoration and repair of 161 houses, Chiltern-rd. and Beecroft estate. Housing Estates Manager. Dep. £1 1s.

***†East Ham C.B.**—66 houses, Ingrave, near Brentwood. Chief Housing Officer. Dep. £5 5s.

*** Halifax C.B.**—Offices and Shops, George-st., B.E., Crossley-st. Dep. £2 2s.

JANUARY 8.

***†Burton-on-Trent C.B.**—79 houses, in 6 groups, Manners housing estate. B.E. & S. Dep. £1 1s. each. Tenders by January 30.

JANUARY 9.

***†Greenwich Boro'.**—46 flats on three sites. B.E. & S.

JANUARY 10.

***†Hants C.C.**—Secondary school, Petersfield. County Architect, Winchester. Dep. £3 3s. Tenders by February 13.

***Tadcaster R.D.C.**—74 houses on various sites. A. Steel and Owen, AA, 89, Albion-st., Leeds, 1. Dep. £2 2s. (7 groups) each.

JANUARY 11.

***Durham C.C.**—Police houses, Paragon-st., Stanhope. G. R. Clayton (F.), Court-la.

***Durham C.C.**—Police house and office, Sacriston-la., Witton Gilbert. G. R. Clayton (F.), Court-la.

JANUARY 12.

***Bournemouth C.B.**—Temporary school building, Kinson C.P. School. Boro' A. Dep. £2 2s.

***York T.C.**—100 houses, Moor-la. estate. Chas. J. Minter, City E. and Architect.

JANUARY 14.

***Leeds T.C.**—Convenience, Farnley Park. City A. Dep. £1 1s.

JANUARY 16.

***Bullington R.D.C.**—20 houses, Chalgrove. H. W. Smith (F.), 29, George-st., Oxford. Dep. £2 2s.

JANUARY 18.

***Barnes B.C.**—Addition to shop, Windermere Court, Londsdale-rd., S.W.13. B.E. & S.

***Berks C.C.**—22 police houses, Clewer Lodge estate, Windsor. County A., Wilton House, Parkside-rd., Reading. Dep. £2 2s.

JANUARY 19.

***Lincoln (Kesteven) C.C.**—Additional accommodation, "Shirley Croft," Harrowby-rd., Grantham, for St. Anne's C. of E. School. County A., Sleaford.

JANUARY 21.

***Ealing Boro'.**—Public convenience, Cleveland Park, W.13. C. W. Seddon, B.E. & S. Dep. £2.

***Shrewsbury Boro'.**—Six shops with maisonettes over at (a) Oakfield estate; (b) Springfield estate; and (c) Crowmoor estate. B.S. Dep. £2 2s.

NO DATE.

***Rawmarsh U.D.C.**—100 houses, Monkwood estate. J. R. S. Creighton, S.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

JANUARY 14.

***Southport C.B.**—Windows, doors, sanitary fittings and installation of electric lighting and heating for 44 houses, Heathfield-rd. estate. Boro' A. and Town Planning Officer, Pavilion-bldgs., Lord-st. Dep. £1 1s. each.

JANUARY 21.

***Battersea B.C.**—Clerk (Materials).

GENERAL BUILDING WORK

(LONDON)

Barnes.—Erection of School.—Surrey County Council propose erection of county primary school at East Sheen to cost £51,742. Plans by J. Harrison, A.R.I.B.A., County A., County Hall, Kingston-on-Thames.

Fulham.—Additional Offices.—B.C. seek Ministry of Housing and Local Government approval for proposed erection of additional offices at Fulham Market Hall site at an estimated £13,000.

Greenwich. — Rebuilding Church. — Llewellyn Smith & Waters, FF.R.I.B.A., 103, Old Brompton-rd., S.W.7, have prepared plans for rebuilding St. Mark's Presbyterian Church.

Hendon.—Flats.—Preliminary plans submitted by Boro' Engineer and Surveyor for proposed erection of nine flats at junction of Edgware-rd. and North-rd., Burnt Oak, have received B.C. Housing Com. approval.

Hendon.—Flats.—Land and Property Trust Co. propose to build 12 flats at junction of Finchley-rd. and Addison Way, Temple Fortune. Plans by Arthur Roy Clare, L.R.I.B.A., 1, High-st., Pinner, Middlesex.

Hornchurch.—Erection of School.—Tooley & Foster, F./A.R.I.B.A., Midland Bank-chbrs., Buckhurst Hill, have prepared plans for grammar school to cost £207,000.

Leatherhead.—Erection of School.—J. Harrison, A.R.I.B.A., Surrey County Architect, Kingston-on-Thames, has prepared plans for county primary school at Ashtead.

Leyton.—Dwellings.—B.C. to erect 88 dwellings at Thornhill-rd. development area and 29 at Livingston College site. Plans by architects' section of the Boro' Engineer and Surveyor's Department.

Portman Square, W.1.—Hotel.—Major A. S. Ash, F.R.I.B.A., 66, Great Cumberland-pl., W.1, has prepared plans for a proposed hotel to be erected on a 2½-acre site bounded by Montagu-st., Upper Berkeley-st., Gloucester-pl. and George-st. The building will have 14 storevs (providing 650 rooms) and a penthouse restaurant. Est. cost, £2½ million. The owners are a large U.S. hotel company headed by Mr. Conrad Hilton.

Southwark.—Development.—Sir John Burnet, Tait and Partners, FF./R.I.B.A., 10, Bedford-sq., W.C.2, have prepared plans for erection of nursery school, two public-houses, a church, 19 houses, nine blocks of flats and maisonettes, one ten-storey block of flats, five shops, a clubroom, two laundries, etc., at Lawson-st. site for L.C.C.

Surbiton.—Factory Extensions. — Siebe-Gorman, Ltd., Davis-rd., Kingston By-pass, propose extensions to their factory. Architects are Hal Williams & Co., Ltd., 43, Bedford-sq., W.C.1.

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(PROVINCIAL)

Alcester.—Francis B. Andrews and Son, A.R.I.B.A., 95, Colmore-row, Birmingham, are architects to R.D.C. for erection of 34 houses on four sites.

Aylesbury.—T.C. to build 44 houses and 16 flats at Southcourt. Plans by Raymond C. White, F.R.I.B.A., Ceely House, Church-st., Aylesbury.

Billingham-on-Tees.—Kitching & Co., 21, Albert-rd., Middlesbrough, have prepared plans for 150 houses at Roseberry-rd. No. 4 site.

Blackpool.—B.C. propose to build maternity and child welfare centre at Mereside to cost £8,000 (estimated).

Brighton.—B.C. propose to erect 139 dwellings at North Brighton estate.

Bury.—E.C. to seek loan of £63,000 for development of Walmersley and Fairfield prim. schools.

Cannock.—R.D.C. propose early erection of further 8 houses at Lapley.

Corby.—Nuffield Trust and Oxford Regional Hospital Board propose erection of new-type health centre.

Coventry.—Work is to commence in 1952 on three prim. and three sec. schools.

Durham.—R.D.C. to build 55 houses in 1952. Plans by Housing Architect, Council Offices, Byland Lodge, Durham.

Durham.—Durham Coal Board are to erect medical centre at Bearpark Colliery.

Eston.—U.D.C. to build 348 houses near Normanby-rd. Layout plans have been prepared by N. C. Harrison, U.D.C. Surveyor.

Exeter.—South-Western Regional Board propose to erect central hospital to plans by A. S. Gray, F.R.I.B.A., 1, Clare-st., Bristol 1.

Gateshead.—T.C. to commence first part of scheme for new £150,000 civic centre at Shipcote. Plans by H. J. Cook, Chief Architect.

Gateshead.—E.C.'s plan for county sec. sch. at Dryden-rd. has been approved by M. of E. Chief Architect is H. J. Cook, Municipal-bldgs., Gateshead.

Gateshead.—Chief Architect to T.C., H. J. Cook, has prepared plans for erection of multi-storeyed flats and maisonettes at central area.

Hathersage.—Managers of St. Michaels R.C. School propose rebuilding scheme at an estimated cost of £9,000.

Lancashire.—County Architect, G. Noel Hill, F.R.I.B.A., County Offices, Preston, has prepared plans for stage 1 of the Nelson College of Further Education.

Lancaster.—M.O.H. approved in principle new office accommodation at Royal Lancaster Infirmary to cost £7,250 (estimated).

Leicester.—H. S. Barnett, 18, Milton-st., Nottingham, has prepared plans for pithead baths at Nailstone Colliery.

Liverpool.—T.C. to prepare plans for reinstatement of portion of the museum; to seek loans of £306,550 for extensions to Liverpool College of Technology; £71,800 for extensions to Liverpool College of Art; £13,500 for first instalment Speke Community Centre; and £16,000 for additional accommodation at Rudston-rd. prim. sch.

Liverpool.—Regional Hospital Board propose new X-ray dept. at Birkenhead Children's Hospital; extension to X-ray dept. at Clatterbridge General Hospital; and new X-ray dept. at Barrowmore Hospital. Plans by Architect to Regional Board.

Manchester.—Regional Hospital Board propose new 800-bed hospital adjoining Higher-la., Whitefield.

Matlock.—U.D.C. approved plans for four police houses and garages at Starkholmes-rd, and at Hurst Rise.

Northampton.—R.D.C. propose erection of eight houses each at Brafield, Duston, Bugbrooke, Nether Heyford, Hackleton and Roade; four each at Billing and Little Houghton; two, Kislingbury; 10, Wooton; and four at Benton and six at Hartwell in 1952.

North Riding.—C.C. to build ambulance station at Thirsk to plans by County Architect, County Hall, Northallerton.

Northumberland.—Sketch plans have been prepared for sec. mod. sch. to cost £60,000 at Newburn for C.C. County Architect is C. C. Brown, County Hall, Newcastle-on-Tyne.

Orrel.—U.D.C. approved plans for additional classrooms at Lamberhead Green county prim. sch. for Lancs E.C.

Prescot.—U.D.C. propose to build 56 houses at Shaw-la.

Rhyl.—Flintshire County Architects, W. Griffiths, L.R.I.B.A., Llewynegren, Mold, has prepared plans for four-bay fire station, headquarters' offices, workshops, officers' houses, etc., at Coast-rd.

Rochdale.—B.C. propose erection of secondary modern school at Kirkholt.

Sedgley.—U.D.C. to build 36 houses at Moden Hill site.

Shipley.—West Riding C.C. to erect 13 houses at Grosvenor-rd., Trenance-dr. and Old Spring Wood area.

Sleaford.—U.D.C. to build 26 houses at Galley Hill site. Plans by F. J. Lenton & Partners, F/AA.R.I.B.A., 16, Broad-st., Stamford.

South Shields.—Boro' E., John Reid, has submitted plan for erection of 126 terrace houses at Auckland-av.; 30 at Harton Downhill; 56 at Lemon-st. and Olive-st.; 15 flats at Lawe-rd.; four bungalows at Simonside; 320 houses at Simonside estate; and 84 on section 3 of Simonside estate.

Staffs.—C.C. seek Home Office approval for erection of fire stations at Uttoxeter at estimated cost of £18,000; Kinver, £9,500 (estimated); and Cheadle, £5,500 (estimated).

Stanley.—U.D.C. to acquire 16 acres of land at Catchgate for housing purposes.

Stevenage.—Development Corporation, Aston House, to erect 394 houses at Bedwell East site.

Stockport.—B.C. propose to erect 15 flats off Brinnington-rd. and propose erection of occupational centre and health centre at Brinnington, 40,000 (estimated).

B.C. approved plans for 38 shops at rear at Brinnington neighbourhood unit; six shops with dwelling accommodation at Longford-rd. West and Ruskin-rd., for W. Farley & Co., Ltd.; and three-storey flats at Davenport Lodge and Fairfield, Bramhall-la., for F. D. Warner.

Stockton-on-Tees.—Boro' A., T. C. Hartley, has prepared plans for additional classrooms and cloakroom at Newtown sch.

Sunderland.—E.C. is to build two schools at Hylton Red House estate in 1952.

Sunderland.—E.C. to build infants' school at Pennywell, £60,000; and prim. sch. at Grindon, £80,000. Boro' A. is H. C. Bishop, Grange House, Stockton-rd., Sunderland.

Sunderland.—T.C. to erect 1,200 houses at Grindon. Boro' Architect is H. C. Bishop, Stockton-rd., Sunderland.

Thurrock.—U.D.C. has received Ministry consent to loan £221,355 for erection of 134 houses, five shops, five maisonettes and 12 garages at Stanford and Corringham; £11,580 for two houses and four bungalows at Neasway, Stifford Clays, and four bungalows at Lenthall and Ward-avenues, Corays; and £39,995 for proposed erection of 12 houses at Stifford Clays and six shops and maisonettes at Aveley.

Tyldesley.—U.D.C. to prepare plans for new swimming bath and public hall.

Wallasey.—B.C. approved outline scheme for new aged persons' hostel at Moreton.

West Bromwich.—H. H. Clement, 33, Gt. Charles-st., Birmingham, is architect to McArthur & Co., Ltd., for erection of new works.

West Bromwich.—B.C. approved scheme for erection of grammar sch. at Churchfields, £53,000; nursery-infants', Harvills Hawthorn, £20,000; infants', Spa-la., £33,600; and sec. mod., Hill Farm, Hamstead, £122,400.

West Hartlepool.—Boro' Architect has prepared working drawings for infant and junior departments at Rossmere county prim. sch.

Whitley Bay.—U.D.C. Surveyor, E. Roberts, has prepared plans for 20 houses at Cauldwell-av., Monkseaton.

Wigan.—Robert Henshall, Ltd., Warrington, propose erection of new factory.

Windsor.—Berks County Architect, J. T. Castle, A.R.I.B.A., Welton-hse., Parkside-rd., Reading, has prepared plans for first section of East Berks College of Further Education to cost £40,000.

Woking.—Surrey County Architect, County Hall, Kingston-on-Thames, has prepared plans for erection of school at Sheerwater West.

Worthing.—B.C. to build 100 houses at Field-pl.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government Departments*.

Alnwick.—32 houses at Howling-la., for U.D.C. Architect is T. J. Cahill, Lloyds Bank-chbrs., Alnwick: *J. Sample, Woodlands, Warkworth.

Alnwick.—Two shops and flats in Howling-la., for U.D.C.: *R. & G. Brown, Ltd., Amble, £7,750.

Atherstone.—24 houses at Mancetter No. 2 estate, for R.D.C.: *Wates, Ltd., London, £33,539.

Barrow-in-Furness.—55 houses at Newbarns (South) housing site, for B.C.: *Direct labour.

Bellingham.—26 houses, for R.D.C. Architects are W. Dixon & Son, 1, Collingwood-st., Newcastle: *H. Kindred, West-rd., Newcastle.

Birkenhead.—Completion of 12 police houses at Prenton-rd. West, for B.C.: *Direct labour.

Bootle.—Houses at Sterrix-la. site, for B.C.: *(18) City Contractors, Ltd., 40, North John-st., Liverpool, £26,900, and *(32) S. Byron (Formby), Ltd., Formby, £44,851.

Bradford.—Erection of public wash-house and slipper baths at Rupert-st.: *Thos. Obank & Sons, Ltd., Thackley, Bradford.

Bridgnorth.—34 houses at Alveley No. 2 site, for R.D.C.: *Buildings and Equipment (Sedgley), Ltd., Wolverhampton-rd. East, Wolverhampton.

Brighton.—Erection of old people's home at Heath Hill-av.: *Jeffery & Son, Ltd., Portland-rd., Hove, £31,804.

Burnley.—Erection of St. Hilda's R.C. School at Cherry Fold, for E.C.: *J. Wimpenny & Co., Ltd., Manchester.

Burton-on-Trent.—Second instalment of Hillside sec. mod. sch., for E.C.: *Thos. Lowe & Sons, Ltd., Curzon-st., Burton, £82,412.

Chesterfield.—14 houses at Newbold estate, for T.C.: *Direct labour, £18,960.

Consett.—Erection of new works at Crookhall, for Thomas Swan & Co., Ltd.: *Direct labour, £10,000.

Darlington.—46 houses at Springfield site, for T.C.: *Direct labour, £63,275.

Derby.—30 houses and two bungalows at Mackworth estate, for B.C.: *Direct labour, £42,519.

Doncaster.—Houses at Cantley estate, for T.C.: *(10) Hemsworth Bros., 62, Ravensworth-rd., *(10) Gorrity Bros., 59, Central Boulevard, Wheatley Hills; and *(6) H. Marshall & Sons, Ltd., 9, Manor-dr.

Dudley.—Two houses and 8 cottages at Dudley Wood, for T.C.: *Wm. Lindley, Ltd., Flood-st., Dudley, £11,866.

Durham.—50 houses at Framwellgate Moor, for T.C.: *William Norman, West-la., Chester-le-Street.

Easington.—14 houses at Wingate, for R.D.C.: *W. Tomlin & Son, South-cres., Seaham.

Ellesmere.—Building works, etc., for Duke of Westminster: *John Laing & Son, Ltd., Carlisle.

Fulham.—Construction of a block of flats at Byam-st., for B.C.:—

E. H. Burgess, Ltd.	£7,180
W. J. Marston & Son, Ltd.	7,157
Swan Brothers (Fulham), Ltd.	6,998
Harry Knight & Son	6,976
W. W. Rowney & Co., Ltd.	6,822
Director of Housing and Public Buildings	6,756
*W. H. Franklin & Sons, Ltd.	6,599
George S. Garner & Son (Builders), Ltd.	6,550

Erection of 10 flats at Munster-rd (William Banfield House estate):—

F. G. Minter, Ltd.	£26,600
Leslie & Co., Ltd.	25,315
Tersons, Ltd.	24,951
Patman & Fotheringham, Ltd.	24,524
Rowley Brothers, Ltd.	24,483
W. J. Marston & Son, Ltd.	24,220
William Willett, Ltd.	23,573
*Director of Housing and Public Buildings	22,991

Gold Coast.—Construction of a multi-storey central hospital and nurses' training centre on the outskirts of Kumasi, Ashanti, for Public Works Department: *Gee, Walker & Slater, Ltd., 100, Park-la., London, W.1., £1,574,817.

Hexham.—14 houses at Ovingham, for R.D.C.: *Charlton & Sons, Crawcrook-on-Tyne.

Leamington Spa.—Houses, for B.C.: *(19) A. C. Lloyd (Builders), Ltd., 4, Dormer-pl.; *(8) A. H. Spicer, 78, Warwick-rd., Kenilworth; *(14) F. Hocking, 384, Stoney Stanton-rd., Coventry; and *(14) A. R. Lane, Ltd., Trafalgar-st., Coventry.

Lewisham.—50 flats at Adelaide-ave., for B.C.:—

James Longley & Co., Ltd.	£112,729
Halse & Sons, Ltd.	112,442
Galbraith Bros., Ltd.	112,238
F. G. Minter, Ltd.	110,928
Thomas Lowe & Sons, Ltd.	110,872
Thomas & Edge, Ltd.	109,941
Rush & Tompkins, Ltd.	107,850
F. & H. F. Higgs, Ltd.	107,287
The Bunting Construction Co., Ltd.	106,247
Gee, Walker & Slater, Ltd.	106,186
Henry Kent (Builders), Ltd.	103,907
A. Roberts & Co., Ltd.	103,810
*W. J. Simms, Sons & Cooke, Ltd.	103,019

Littleborough.—14 houses at Walbank, for U.D.C.: *C. Taylor & Son (Bacup), Ltd., £16,500.

Liverpool.—Rebuilding shop and office block at 58-66, Lime-st., for DuBarry, Ltd.: *Roberts & Sloss, Ltd., 23, Baker-st., Liverpool.

¶**London (Admiralty).**—Particulars of contracts placed by Civil Engineer-in-Chief's Dept., Admiralty.—*Gosport*: Construction of buildings, Jno. Croad, 6a, High-st., Fareham, Hants.

L.C.C.—Erection of Abney Park County primary school at Stoke Newington and Hackney North.

Tersons, Ltd. Seward-st., E.C.1	£149,426
C. P. Roberts & Co., Ltd., Holborn	148,690
E. H. Smith (Croydon), Ltd., Croydon	148,200
Prestige & Co., Ltd., Westminster	147,598
Kent and Sussex (Contractors), Ltd., Westminster	146,284
M. J. Gleeson (Contractors), Ltd., North Cheam	145,489
Thomas and Edge Ltd., Woolwich	141,427
Patman and Fotheringham, Ltd., Islington	139,211
Kirk and Kirk, Ltd., Putney	139,045
J. Garrett & Son, Ltd., Wandsworth	137,890
*G. E. Wallis & Sons, Ltd., Westminster	133,235

The architect's comparable estimate is £132,222.

War damage repairs and improvements at Alexander McLeod county primary school.

William Mills & Sons, Ltd., Woolwich	£30,460
F. Parham, Ltd., Gillingham	29,670
Truett and Steel, Ltd., Thornton Heath	29,310
Arthur J. Tatham (Builders), Ltd., Orpington	29,217
William Blood, Ltd., Lambeth	28,927
Henry Kent (Builders), Ltd., Lewisham	28,527
Campbell and McGill, Ltd., Chislehurst	28,525
Thomas and Edge, Ltd., Woolwich	28,467
Herbert Richardson & Sons, Ltd., Crayford	28,340
Galbraith Bros., Ltd., Bartholomew Close, E.C.1	27,495
A. J. Dunning & Sons (Weyhill), Ltd., Woolwich	26,815
*W. W. Rowney & Co., Ltd., Lambeth	25,800

The comparable estimate of the firm of architects in private practice responsible for the work is £27,553.

Construction of 40 flats in two five-storey blocks and other works at Goldsmith's estate, Shoreditch.

Stewart and Partners, Ltd., St. Marylebone	93,354
A. Roberts & Co., Ltd., Westminster	90,970
Charles S. Foster & Sons, Ltd., Loughton	90,369
A. T. Rowley (London), Ltd., Tottenham	89,998
W. H. Gaze & Sons, Ltd., Kingston-on-Thames	88,963
Herbert Richardson & Sons, Ltd., Erith	88,655
Thomas Bates & Sons, Ltd., Harold Wood	88,374
The Bunting Construction Co., Ltd., Lambeth	87,965
C. F. Kearley, Ltd., Chiswick	87,870
F. and H. F. Higgs, Ltd., Camberwell	87,250
*F. Troy & Co., Ltd., Southwark	85,726

The comparable estimate of the appointed architects, C. Lovett Gill and Partners, is £85,454.

Erection of 16 flats and 12 maisonettes at Lilestone estate, St. Marylebone.

J. M. Hill & Sons, Ltd., Wembley	£65,628
M. J. Gleeson (Contractors), Ltd., North Cheam	64,960
Thos. Bates & Son, Ltd., Harold Wood	62,691
Leslie & Co., Ltd., Kensington	61,230
Whyatt (Builders), Ltd., Wandsworth	59,597
C. Bryant & Son, Ltd., Westminster	58,742
Tersons, Ltd., Finsbury	58,523
Foster and Dicksee, Ltd., St. Marylebone	57,112
Y. J. Lovell & Son, Ltd., Paddington	57,057
Kent and Sussex Contractors, Ltd., Westminster	56,995
W. J. Marston & Son, Ltd., Fulham	56,811
Gee, Walker and Slater, Ltd., Westminster	56,596
Sloggetts (Contractors), Ltd., Kensington	55,953
*A. T. Rowley (London), Ltd., Tottenham	55,333

The comparable estimate of the director of housing and valuer is £57,883.

Construction of a five-storey block with four-storey wings, comprising 36 flats, and other work at Vauxhall Gardens estate, Lambeth.

Frank Batty and Smith, Ltd., Paddington	£73,059
C. P. Roberts & Co., Ltd., Holborn	71,406
Speirs, Ltd., Westminster	69,996
Wilson Lovatt & Sons, Ltd., Westminster	69,353

Tersons, Ltd., Finsbury	69,010
Kent and Sussex Contractors, Ltd., Westminster	68,611

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Clarke Barton & Co., Ltd., Belmont... ...	66,929
*Gee, Walker and Slater, Ltd., Westminster	63,556

The comparable estimate of the director of housing and valuer is £64,334.

Erection of 230 flats and three-storey block of four shops with four maisonettes above at Frampton Park estate, Hackney.

Charles S. Foster & Sons, Ltd., Loughton...	£546,939
Patman and Fotheringham, Ltd., Islington	544,215
Prestige & Co., Ltd., Westminster	543,991
Thomas and Edge, Ltd., Woolwich	541,179
The Unit Construction Co., Ltd., Bracknell	534,296
Gee, Walker and Slater, Ltd., Westminster	528,913
Halse & Sons, Ltd., Woolwich	524,125
Rowley Brothers, Ltd., Tottenham ...	523,250
W. J. Simms, Sons and Cooke, Ltd., Westminster	513,637
Tersons, Ltd., Finsbury...	504,811
*E. H. Smith (Croydon), Ltd., Croydon ...	500,099

The comparable estimate of the appointed architects, Henry Tanner, is £507,625.

¶London (M.O.W).—Contracts placed by M.O.W. during week ended December 8:—

London: 193, Cricklewood-broadway, adaptations to form B.P.O., Geo. Moss & Son, Ltd., Cranleigh Wharf, Lady Margaret-rd., Southall. *Fifeshire*: H.P.O., Kirkcaldy, extension of welfare and apparatus room, Geo. Smith & Son, 2, Victoria-rd., Kirkcaldy. *Lincolnshire*: Wellingham House, Market Rasen, erection of food storage depot, F. A. Would, Ltd., Ladysmith-rd., Grimsby. *Warwickshire*: Queslett, Birmingham, erection of telephone repeater station, M. J. Gleeson Contractors, Ltd., 816-822, Chesterfield-rd., Sheffield.

¶London (War Dept.).—Works contracts placed by W.D. during week ended December 8:—

Nottinghamshire: Building work, C. V. Russell & Son, Collingham, nr. Newark. *Warwickshire*: Boiler installation, G. Dawson & Sons, Ltd., Salford, 3. *Somersetshire*: Miscellaneous, H. J. Maunders, Bristol, 2. *Wiltshire*: Miscellaneous, F. W. Beard, Ltd., Swindon. *Hampshire*: Building work, Jno. Croad, Portsmouth; painting work, Arnold Sharrocks, Aldershot; building work, Frank J. Privett, Ltd., Portsmouth. *Dorsetshire*: Miscellaneous: Jesty & Baker, Weymouth.

Mansfield.—Rebuilding workshop block at College of Further Education, for Notts E.C.: *Greenwood (Mansfield), Ltd., 2, Wood-st., Mansfield, £34,650.

Newburn.—Six shops and houses, for U.D.C.: *J. E. Harrison & Sons, Western-ave., Leamington.

Newcastle.—8 houses and 8 flats in Newcastle: *J. McEwan, 20, Croftsway, Newcastle-on-Tyne.

Newcastle.—5 houses and 4 flats at Slatyford estate: *Sydney Reed, 10, Lyndhurst-ave., Jesmond, Newcastle.

Newcastle.—10 houses, for T.C.: *J. J. Hedley, 9, Manor Chase, Newcastle-on-Tyne.

Newcastle-on-Tyne.—39 houses and 20 flats, for T.C.: *M. J. Liddell, 36, North-rd., Newcastle-on-Tyne.

Newcastle-on-Tyne.—32 houses and 12 flats, for T.C.: *J. M. Black (Junior), Ltd., Station-rd., Hebburn-on-Tyne.

Newcastle-on-Tyne.—Erection of Rutherford sec. grammar sch., for E.C. City Education Architect is F. W. Harvey: *A. Anderson (Contractors), Ltd., Stanmore-rd., Newcastle, £207,750.

Newcastle-on-Tyne.—14 single-storey shops and 18 garages at Blakelaw, for T.C. City Architect is George Kenyon, 18, Cloth-market, Newcastle: *C. S. Hogg (Builders), Ltd., 261, Two Ball Lonnen, Newcastle-on-Tyne.

North Westmorland.—Four shops at Shap, for R.D.C.: *P. A. Baines & Sons, Culgaith, £6,997.

Oxford.—Erection of shops and maisonettes at Barton site: *Knowles & Son, Ltd., 27, Pembroke-st., St. Clements, Oxford.

Peterborough.—50 houses at Mountsteven-ave. estate, for T.C.: *Chas. W. Shelton, Ltd., 30, Westwood Park-rd., £62,775.

Plymouth.—Showrooms and offices, for Boots Pure Drug Stores, Ltd., Nottingham: *Staverton Builders, Ltd., Totnes.

Salford.—66 flats at Islington-st., for T.C.: *Unit Construction Co., Ltd., Knutsford, £110,241 recommended.

Seaham.—Eight shops and flats at Parkside estate, for U.D.C.: *W. Tomlin & Son, South-cres., Seaham.

Skelton.—22 houses at Boosbeck, for U.D.C.: *Westfield Estates, Ltd., West-ter., Redcar.

Sunderland.—Site preparation works for 1,600 houses at Castletown, for T.C.: *Yorkshire Builders, Ltd., Cleckheaton, Yorkshire, £289,046.

Sutton Coldfield.—27 dwellings, Falcon Lodge estate, for B.C.: *Henry Boot & Sons, Ltd., The Beeches-rd., Birmingham, £34,512.

Wallasey.—Alterations and additions to offices, for B.C.: *W. H. Roberts & Son, 50, King-st., £7,340.

Wallsend.—100 houses to be built in 1952 for T.C.: *(60) J. H. James, Archer-st., Wallsend, and *(40) Armstrong (Builders), Ltd., Kenton, Newcastle.

Wandsworth.—Six flats on two sites at Bedgebury-gdns., for B.C.: *Winton Ruffe & Co., Ltd., £9,966.

Wirksworth.—12 houses at Steeple Grange site, for U.D.C.: *W. Alton & Sons, Ltd., £19,795.

Worcester.—16 houses at Newtown No. 1 estate, for T.C.: *Wates, Ltd., London. £22,496.

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